STIC Search Report
EIC 1700

STIC Database Tracking Number: 195307

TO: Camie Thompson Location: REM 10D28 Art Unit : 1774 July 13, 2006 Case Serial Number: 10/642933	From: Usha Shrestha Location: EIC 1700 REMSEN 4B28 Phone: 571/272-3519 usha.shrestha@uspto.gov

Search Notes

Access DB# 195307

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Cammie Thompson Examiner #: 79244 Date: 7/11/06
Art Unit: 1774 Phone Number 30 571-272-1530 Serial Number: 10/642,933
Mail Box and Bldg/Room Location: Remsen 10D28 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Layer Configuration with improved stability

Inventors (please provide full names): Frank Louwet; Geert Dyck; Johan Loccufier; Bert Groenendaal; Hieronymus Andriessen

Earliest Priority Filing Date: 8/23/02

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please do a search on claims

1 - 48

Thanks

AMENDMENTS TO THE CLAIMS

1. (Original) A layer configuration on a support, said layer configuration comprising a layer containing a polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of polyphosphoric acids, polyphosphoric acid salts, thia-alkanedicarboxylic acids, cyclohexadiene compounds and polyhydroxy-compounds selected from the group consisting of tetronic-acid-derivatives; ortho-dihydroxybenzene compounds with at least one sulpho group, compounds according to formula (I):

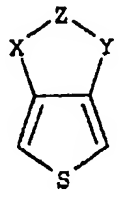
$$HO\text{-}CH_2\text{-}CH(OH)\text{-}(CH_2)_m\text{-}S\text{-}CH_2\text{-}C(R^1)(R^2)\text{-}CH_2\text{-}S\text{-}(CH_2)_n\text{-}CH(OH)\text{-}CH_2\text{-}OH \quad (I)$$

wherein R^1 and R^2 are independently H, -OH or alkyl, and n and m are independently 1, 2 or 3; compounds according to formula (II):

$$HO\text{-}(CH_2)_p\text{-}S\text{-}CH_2\text{-}S\text{-}(CH_2)_q\text{-}OH \quad (II)$$

wherein p and q are independently 2, 3 or 4; compounds hydrolyzable to tetronic acid derivatives; compounds hydrolyzable to compounds according to formula (I); and sulpho-substituted 2-thia-alkyl-benzimidazole compounds.

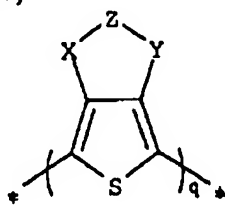
2. (Original) Layer configuration according to claim 1, wherein said optionally substituted 3,4-alkylenedioxythiophene structural units are represented by formula (III):



(III)

in which X and Y are O, Z is $-(CH_2)_m\text{-}CR^3R^4\text{-}(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; R^4 is $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18.

3. (Original) Layer configuration according to claim 1, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is a polythiophene according to formula (IV)



(IV)

in which X and Y are O; Z is $-(CH_2)_m-CR^3R^4-(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; R^4 is $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18; and q is a whole number from 2 to 10,000.

4. (Original) Layer configuration according to claim 1, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly[4-(2,3-dihydro-thieno[3,4-*b*][1,4]dioxin-2-ylmethoxy)-butane-1-sulphonic acid].

5. (Original) Layer configuration according to claim 1, wherein said polymer is selected from the group consisting of: poly(3,4-methylenedioxy-thiophene), poly(3,4-methylenedioxythiophene) derivatives, poly(3,4-ethylenedioxythiophene), poly(3,4-ethylenedioxy-thiophene) derivatives, poly(3,4-propylenedioxythiophene), poly(3,4-propylenedioxythiophene) derivatives, poly(3,4-butylenedioxythiophene), poly(3,4-butylenedioxythiophene) derivatives and copolymers therewith.

6. (Original) Layer configuration according to claim 1, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly(3,4-ethylenedioxythiophene).

7. (Original) Layer configuration according to claim 1, wherein said layer further contains a polyanion.

8. (Original) Layer configuration according to claim 7, wherein said polyanion is poly(styrene sulphonate).

9. (Original) A light emitting diode consisting of a layer configuration on a support, said layer configuration comprising a layer containing a polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of polyphosphoric acids, polyphosphoric acid salts, thia-alkanedicarboxylic acids,

cyclohexadiene compounds and polyhydroxy-compounds selected from the group consisting of tetronic acid derivatives; ortho-dihydroxybenzene compounds with at least one sulpho group, compounds according to formula (I):

$$HO\text{-}CH_2\text{-}CH(OH)\text{-}(CH_2)_m\text{-}S\text{-}CH_2\text{-}C(R^1)(R^2)\text{-}CH_2\text{-}S\text{-}(CH_2)_n\text{-}CH(OH)\text{-}CH_2\text{-}OH \quad (I)$$

wherein R^1 and R^2 are independently H, -OH or alkyl; and n and m are independently 1, 2 or 3; compounds according to formula (II):

$$HO\text{-}(CH_2)_p\text{-}S\text{-}CH_2\text{-}S\text{-}(CH_2)_q\text{-}OH \quad (II)$$

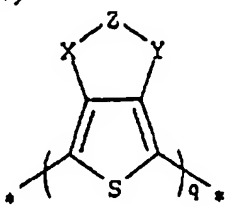
wherein p and q are independently 2, 3 or 4; compounds hydrolyzable to tetronic acid derivatives; compounds hydrolyzable to compounds according to formula (I); and sulpho-substituted 2-thia-alkyl-benzimidazole compounds.

10. (Original) Light emitting diode according to claim 9, wherein said optionally substituted 3,4-alkylenedioxythiophene structural units are represented by formula (III):

(III)

in which X and Y are O, Z is $-(CH_2)_m\text{-}CR^3R^4\text{-}(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; R^4 is $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18.

11. (Original) Light emitting diode according to claim 9, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is a polythiophene according to formula (IV)



(IV)

in which X and Y are O; Z is $-(CH_2)_m-CR^3R^4-(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; R^4 is $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18; and q is a whole number from 2 to 10,000.

12. (Original) Light emitting diode according to claim 9, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly[4-(2,3-dihydro-thieno[3,4-*b*][1,4]dioxin-2-ylmethoxy)-butane-1-sulphonic acid].

13. (Original) Light emitting diode according to claim 9, wherein said polymer is selected from the group consisting of: poly(3,4-methylenedioxy-thiophene), poly(3,4-methylenedioxythiophene) derivatives, poly(3,4-ethylenedioxythiophene), poly(3,4-ethylenedioxy-thiophene) derivatives, poly(3,4-propylenedioxythiophene), poly(3,4-propylenedioxythiophene) derivatives, poly(3,4-butylenedioxythiophene), poly(3,4-butylenedioxythiophene) derivatives and copolymers therewith.

14. (Original) Light emitting diode according to claim 9, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly(3,4-ethylenedioxythiophene).

15. (Original) Light emitting diode according to claim 9, wherein said layer further contains a polyanion.

16. (Original) Light emitting diode according to claim 15, wherein said polyanion is poly(styrene sulphonate).

17. (Original) A photovoltaic device consisting of a layer configuration on a support, said layer configuration comprising a layer containing a polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of polyphosphoric acids, polyphosphoric acid salts, thia-alkanedicarboxylic acids, cyclohexadiene compounds and polyhydroxy-compounds selected from the group consisting of tetronic acid derivatives; ortho-dihydroxybenzene compounds with at least one sulpho group, compounds according to formula (I):

$$HO-CH_2-CH(OH)-(CH_2)_m-S-CH_2-C(R^1)(R^2)-CH_2-S-(CH_2)_n-CH(OH)-CH_2-OH \quad (I)$$

wherein R^1 and R^2 are independently H, -OH or alkyl, and n and m are independently 1, 2 or 3; compounds according to formula (II):

$$HO-(CH_2)_p-S-CH_2-S-(CH_2)_q-OH \quad (II)$$

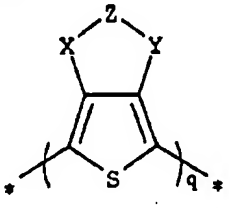
wherein p and q are independently 2, 3 or 4; compounds hydrolyzable to tetronic acid derivatives; compounds hydrolyzable to compounds according to formula (I); and sulpho-substituted 2-thia-alkyl-benzimidazole compounds.

18. (Original) Photovoltaic device according to claim 17, wherein said optionally substituted 3,4-alkylenedioxythiophene structural units are represented by formula (III):

(III)

in which X and Y are O, Z is $-(CH_2)_m-CR^3R^4-(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; R^4 is $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18.

19. (Original) Photovoltaic device according to claim 17, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is a polythiophene according to formula (IV)



(IV)

in which X and Y are O; Z is $-(CH_2)_m-CR^3R^4-(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; R^4 is $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18; and q is a whole number from 2 to 10,000.

20. (Original) Photovoltaic device according to claim 17, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly[4-(2,3-dihydro-thieno[3,4-*b*][1,4]dioxin-2-ylmethoxy)-butane-1-sulphonic acid].

21. (Original) Photovoltaic device according to claim 17, wherein said polymer is selected from the group consisting of: poly(3,4-methylenedioxy-thiophene), poly(3,4-methylenedioxythiophene) derivatives, poly(3,4-ethylenedioxythiophene), poly(3,4-ethylenedioxy-thiophene) derivatives, poly(3,4-propylenedioxythiophene), poly(3,4-propylenedioxythiophene) derivatives, poly(3,4-butylenedioxythiophene), poly(3,4-butylenedioxythiophene) derivatives and copolymers therewith.

22. (Original) Photovoltaic device according to claim 17, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly(3,4-ethylenedioxythiophene).

23. (Original) Photovoltaic device according to claim 17, wherein said layer further contains a polyanion.

24. (Original) Photovoltaic device according to claim 23, wherein said polyanion is poly(styrene sulphonate).

25. (Original) A solar cell consisting of a layer configuration on a support, said layer configuration comprising a layer containing a polymer containing optionally substituted 3,4-alkylenedioxy-thiophene structural units, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of polyphosphoric acids, polyphosphoric acid salts, thia-alkanedicarboxylic acids, cyclohexadiene compounds and polyhydroxy-compounds selected from the group consisting of tetronic acid derivatives; ortho-dihydroxybenzene compounds with at least one sulpho group, compounds according to formula (I):

$$HO\text{-}CH_2\text{-}CH(OH)\text{-}(CH_2)_m\text{-}S\text{-}CH_2\text{-}C(R^1)(R^2)\text{-}CH_2\text{-}S\text{-}(CH_2)_n\text{-}CH(OH)\text{-}CH_2\text{-}OH \quad (I)$$

wherein R^1 and R^2 are independently H, -OH or alkyl, and n and m are independently 1, 2 or 3; compounds according to formula (II):

$$HO\text{-}(CH_2)_p\text{-}S\text{-}CH_2\text{-}S\text{-}(CH_2)_q\text{-}OH \quad (II)$$

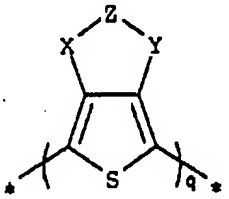
wherein p and q are independently 2, 3 or 4; compounds hydrolyzable to tetronic acid derivatives; compounds hydrolyzable to compounds according to formula (I); and sulpho-substituted 2-thia-alkyl-benzimidazole compounds.

26. (Original) Solar cell according to claim 25, wherein said optionally substituted 3,4-alkylenedioxythiophene structural units are represented by formula (III):

(III)

in which X and Y are O, Z is $-(CH_2)_m-CR^3R^4-(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; R^4 is $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18.

27. (Original) Solar cell according to claim 25, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is a polythiophene according to formula (IV)



(IV)

in which X and Y are O; Z is $-(CH_2)_m-CR^3R^4-(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; R^4 is $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18; and q is a whole number from 2 to 10,000.

28. (Original) Solar cell according to claim 25, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly[4-(2,3-dihydro-thieno[3,4-*b*][1,4]dioxin-2-ylmethoxy)-butane-1-sulphonic acid].

29. (Original) Solar cell according to claim 25, wherein said polymer is selected from the group consisting of: poly(3,4-methylene-dioxythiophene), poly(3,4-methylenedioxythiophene) derivatives, poly(3,4-ethylenedioxythiophene), poly(3,4-ethylenedioxythiophene) derivatives, poly(3,4-propylenedioxy-thiophene), poly(3,4-propylenedioxythiophene) derivatives, poly(3,4-butylenedioxythiophene), poly(3,4-butylenedioxy-thiophene) derivatives and copolymers therewith.

30. (Original) Solar cell according to claim 25, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly(3,4-ethylenedioxythiophene).

31. (Original) Solar cell according to claim 25, wherein said layer further contains a polyanion.

32. (Original) Solar cell according to claim 31, wherein said polyanion is poly(styrene sulphonate).

33. (Original) A transistor consisting of a layer configuration on a support, said layer configuration comprising a layer containing a polymer containing optionally substituted 3,4-alkylenedioxy-thiophene structural units, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of polyphosphoric acids, polyphosphoric acid salts, thia-alkanedicarboxylic acids, cyclohexadiene compounds and polyhydroxy-compounds selected from the group consisting of tetronic acid derivatives; ortho-dihydroxybenzene compounds with at least one sulpho group, compounds according to formula (I):

$$HO\text{-}CH_2\text{-}CH(OH)\text{-}(CH_2)_m\text{-}S\text{-}CH_2\text{-}C(R^1)(R^2)\text{-}CH_2\text{-}S\text{-}(CH_2)_n\text{-}CH(OH)\text{-}CH_2\text{-}OH \quad (I)$$

wherein R^1 and R^2 are independently H, -OH or alkyl, and n and m are independently 1, 2 or 3; compounds according to formula (II):

$$HO\text{-}(CH_2)_p\text{-}S\text{-}CH_2\text{-}S\text{-}(CH_2)_q\text{-}OH \quad (II)$$

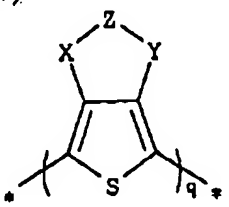
wherein p and q are independently 2, 3 or 4; compounds hydrolyzable to tetronic acid derivatives; compounds hydrolyzable to compounds according to formula (I); and sulpho-substituted 2-thia-alkyl-benzimidazole compounds.

34. (Original) Transistor according to claim 33, wherein said optionally substituted 3,4-alkylenedioxythiophene structural units are represented by formula (III):

(III)

in which X and Y are O, Z is $-(CH_2)_m\text{-}CR^3R^4\text{-}(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; R^4 is $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18.

35. (Original) Transistor according to claim 33, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is a polythiophene according to formula (IV)



(IV)

in which X and Y are O; Z is $-(CH_2)_m-CR^3R^4-(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; R^4 is $-(CH_2)_s-O-(CH_2)_p-SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18; and q is a whole number from 2 to 10,000.

36. (Original) Transistor according to claim 33, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly[4-(2,3-dihydro-thieno[3,4-*b*][1,4]dioxin-2-ylmethoxy)-butane-1-sulphonic acid].

37. (Original) Transistor according to claim 33, wherein said polymer is selected from the group consisting of: poly(3,4-methylene-dioxythiophene), poly(3,4-methylenedioxythiophene) derivatives, poly(3,4-ethylenedioxythiophene), poly(3,4-ethylenedioxythiophene) derivatives, poly(3,4-propylenedioxy-thiophene), poly(3,4-propylenedioxythiophene) derivatives, poly(3,4-butylenedioxythiophene), poly(3,4-butylenedioxy-thiophene) derivatives and copolymers therewith.

38. (Original) Transistor according to claim 33, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is poly(3,4-ethylenedioxythiophene).

39. (Original) Transistor according to claim 33, wherein said layer further contains a polyanion.

40. (Original) Transistor according to claim 39, wherein said polyanion is poly(styrene sulphonate).

41. (Original) An electroluminescent device consisting of a layer configuration on a support, said layer configuration comprising a layer containing a polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units, in which said two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of polyphosphoric acids, polyphosphoric acid salts, thia-alkanedicarboxylic acids, cyclohexadiene compounds and polyhydroxy-compounds selected from the

group consisting of tetronic acid derivatives; ortho-dihydroxybenzene compounds with at least one sulpho group, compounds according to formula (I):

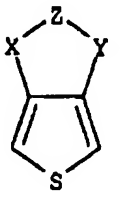
$$HO\text{-}CH_2\text{-}CH(OH)\text{-}(CH_2)_m\text{-}S\text{-}CH_2\text{-}C(R^1)(R^2)\text{-}CH_2\text{-}S\text{-}(CH_2)_n\text{-}CH(OH)\text{-}CH_2\text{-}OH \quad (I)$$

wherein R^1 and R^2 are independently H, -OH or alkyl, and n and m are independently 1, 2 or 3; compounds according to formula (II):

$$HO\text{-}(CH_2)_p\text{-}S\text{-}CH_2\text{-}S\text{-}(CH_2)_q\text{-}OH \quad (II)$$

wherein p and q are independently 2, 3 or 4; compounds hydrolyzable to tetronic acid derivatives; compounds hydrolyzable to compounds according to formula (I); and sulpho-substituted 2-thia-alkyl-benzimidazole compounds.

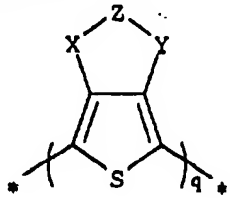
42. (Original) Electroluminescent device according to claim 41, wherein said optionally substituted 3,4-alkylenedioxythiophene structural units are represented by formula (III):



(III)

in which X and Y are O, Z is $-(CH_2)_m\text{-}CR^3R^4\text{-}(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; R^4 is $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; M^+ is a cation; m and n are independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18.

43. (Original) Electroluminescent device according to claim 41, wherein said polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units is a polythiophene according to formula (IV)



(IV)

in which X and Y are O; Z is $-(CH_2)_m\text{-}CR^3R^4\text{-}(CH_2)_n-$; R^3 is hydrogen or $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; R^4 is $-(CH_2)_s\text{-}O\text{-}(CH_2)_p\text{-}SO_3^-M^+$; M^+ is a cation; m and n are

independently a whole number from 0 to 3; s is a whole number from 0 to 10; and p is a whole number from 1 to 18; and q is a whole number from 2 to 10,000.

44. (Original) Electroluminescent device according to claim 41, wherein said polymer containing optionally substituted 3,4-alkylenedioxy-thiophene structural units is poly[4-(2,3-dihydro-thieno[3,4-*b*][1,4]dioxin-2-ylmethoxy)-butane-1-sulphonic acid].

45. (Original) Electroluminescent device according to claim 41, wherein said polymer is selected from the group consisting of: poly(3,4-methylenedioxy-thiophene), poly(3,4-methylenedioxythiophene) derivatives, poly(3,4-ethylenedioxythiophene), poly(3,4-ethylenedioxythiophene) derivatives, poly(3,4-propylenedioxy-thiophene), poly(3,4-propylenedioxythiophene) derivatives, poly(3,4-butylenedioxythiophene), poly(3,4-butylenedioxy-thiophene) derivatives and copolymers therewith.

46. (Original) Electroluminescent device according to claim 41, wherein said polymer containing optionally substituted 3,4-alkylenedioxy-thiophene structural units is poly(3,4-ethylenedioxy-thiophene).

47. (Original) Electroluminescent device according to claim 41, wherein said layer further contains a polyanion.

48. (Original) Electroluminescent device according to claim 47, wherein said polyanion is poly(styrene sulphonate).

This listing of claims replaces all prior versions, and listings, of claims in the application.

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FILE 'REGISTRY' ENTERED AT 10:54:04 ON 13 JUL 2006

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     FILE 'HCAPLUS' ENTERED AT 08:14:59 ON 13 JUL 2006
L1             1 SEA ABB=ON  US20040043895/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 08:15:15 ON 13 JUL 2006
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                 150504-14-6/BI OR 202927-42-2/BI OR 146796-02-3/BI OR
                 146796-14-7/BI OR 1633-83-6/BI OR 204444-01-9/BI OR
                 204444-03-1/BI OR 29797-09-9/BI OR 30619-16-0/BI OR
                 3132-64-7/BI OR 4971-56-6/BI OR 50851-57-5/BI OR
                 51-17-2/BI OR 540803-64-3/BI OR 58416-04-9/BI OR
                 667420-85-1/BI OR 7646-69-7/BI)
L3               STR
L4            18 SEA SSS SAM L3
L5          4928 SEA SSS FUL L3
L6            11 SEA ABB=ON  L5 AND L2
L7             1 SEA ABB=ON  4971-56-6/RN
L8             1 SEA ABB=ON  29797-09-9/RN
L9             1 SEA ABB=ON  51-17-2/RN
                 SAV L5 THO933/A
L10            1 SEA ABB=ON  PHOSPHORIC ACID/CN
L11         2889 SEA ABB=ON  L5 NOT 1-100/N
L12         2775 SEA ABB=ON  L11 NOT 1-100/M

     FILE 'HCAPLUS' ENTERED AT 10:06:08 ON 13 JUL 2006
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L16         1928 SEA ABB=ON  L9/D
L17       132981 SEA ABB=ON  L10 OR ?PHOSPHORIC(A)ACID?
L18           59 SEA ABB=ON  DIHYDROXYBENZENE?(L)(SULFUR? OR SULPHUR?)
L19            0 SEA ABB=ON  L13 AND L18
L20           19 SEA ABB=ON  DIHYDROXYBENZENE?(3A)(SULFUR? OR SULPHUR?)
L21            0 SEA ABB=ON  L13 AND L20
L22       882550 SEA ABB=ON  L10 OR ?PHOSPHORIC(A)ACID? OR ?PHOSPHATE?
L23          189 SEA ABB=ON  L13 AND (L14 OR L15 OR L16 OR L22)
L24            3 SEA ABB=ON  L23 AND LAYER?(A)(STRUCTURE? OR CONFIGURATI
                 ON?)
L25          111 SEA ABB=ON  L23 AND DEV/RL
L26           50 SEA ABB=ON  L25 AND (1840-2002)/PRY,AY,PY
L27           21 SEA ABB=ON  L26 AND PLASTIC?/SC,SX
L28          271 SEA ABB=ON  L7
L29          470 SEA ABB=ON  L8
L30         6295 SEA ABB=ON  L9
L31            5 SEA ABB=ON  L13 AND (L28 OR L29 OR L30)
L32            2 SEA ABB=ON  L31 AND DEV/RL
L33           22 SEA ABB=ON  L27 OR L32
L34           47 SEA ABB=ON  L13 AND LAYER?(A)(STRUCTURE? OR CONFIGURATI
                 ON?)
L35           41 SEA ABB=ON  L34 AND DEV/RL
L36           19 SEA ABB=ON  L35 AND (1840-2002)/PRY,AY,PY
L37           18 SEA ABB=ON  L36 AND (ELECTROLUMIN? OR ELECTRO(A)LUMIN?
                 OR LUMIN? OR LIGHT(A)EMIT? OR PHOTOELECTRIC? OR
                 SOLAR(A)CELL? OR TRANSISTOR? OR ELECTRONIC?(A)DEVIC?)
L38           37 SEA ABB=ON  L27 OR L37
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L39          37 SEA ABB=ON  L19 OR L21 OR L38
L40          18 SEA ABB=ON  L26 AND (ELECTROLUMIN? OR ELECTRO(A)LUMIN?
                OR LUMIN? OR LIGHT(A)EMIT? OR PHOTOELECTRIC? OR
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L41          47 SEA ABB=ON  L39 OR L40


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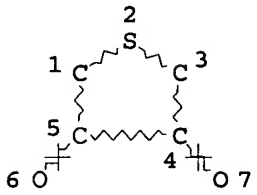


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NODE ATTRIBUTES:
NSPEC   IS RC     AT   6
NSPEC   IS RC     AT   7
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   7

STEREO ATTRIBUTES: NONE
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                PHOTOELECTRIC? OR SOLAR(A)CELL? OR TRANSISTOR? OR
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L41          47 SEA FILE=HCAPLUS ABB=ON  L39 OR L40


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FILE 'HCAPLUS' ENTERED AT 10:54:18 ON 13 JUL 2006


=> d l41 1-47 ibib abs hitstr hitind

L41  ANSWER 1 OF 47  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2004:589791  HCAPLUS
DOCUMENT NUMBER:          141:126377
TITLE:                    Gas diffusion layer containing inherently
                          conductive polymer for fuel cells
INVENTOR(S):              Kinkelaar, Mark R.; Finkelshtain, Gennadi
PATENT ASSIGNEE(S):       Foamex L.P., USA
SOURCE:                   PCT Int. Appl., 54 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     WO 2004062020         A2    20040722    WO 2003-US39111
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             RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,
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     US 2004191605         A1    20040930    US 2003-744133
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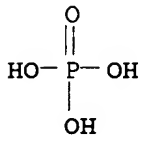
PRIORITY APPLN. INFO.: <-- US 2002-436459P P 2002 1227
<-- WO 2003-US39111 W 2003 1224

AB A gas diffusion layer comprises a porous material and an elec. conductive material coating at least a portion of an external surface of the porous material, wherein the elec. conductive material comprises at least one inherently conductive polymer. When placed adjacent to or in contact with a cathode of a polymer electrolyte or proton exchange membrane (PEM) fuel cell, the gas diffusion layer helps deliver oxygen to the cathode. The gas diffusion layer may be placed adjacent to or in contact with an anode of a PEM fuel cell to help deliver hydrogen to the anode.

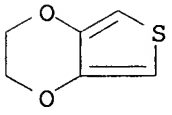
IT **7664-38-2, Phosphoric acid**, uses
(dopant; gas diffusion layer containing inherently conductive polymer for fuel cells)
RN 7664-38-2 HCAPLUS
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **126213-51-2**, Polyethylenedioxythiophene
(gas diffusion layer containing inherently conductive polymer for fuel cells)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01M008-10
ICS H01M004-86
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): **38**
IT 6303-21-5, Phosphinic acid 7647-01-0, Hydrochloric acid, uses
7664-38-2, Phosphoric acid, uses
7697-37-2, Nitric acid, uses 7705-08-0, Ferric chloride, uses
13598-36-2, Phosphorous acid, uses 25756-87-0, Phosphinous acid
50497-67-1

(dopant; gas diffusion layer containing inherently conductive polymer for fuel cells)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 67-64-1, Acetone, uses 68-12-2, Dmf, uses 71-43-2, Benzene, uses 95-47-6, o-Xylene, uses 100-41-4, Ethylbenzene, uses 100-66-3, Anisole, uses 106-42-3, p-Xylene, uses 108-38-3, m-Xylene, uses 108-88-3, Toluene, uses 109-99-9, Thf, uses 110-82-7, Cyclohexane, uses 123-91-1, Dioxane, uses 142-82-5, n-Heptane, uses 872-50-4, uses 1330-20-7, Xylene, uses 7429-90-5, Aluminum, uses 7439-88-5, Iridium, uses 7439-89-6, Iron, uses 7439-96-5, Manganese, uses 7440-02-0, Nickel, uses 7440-04-2, Osmium, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-15-5, Rhenium, uses 7440-16-6, Rhodium, uses 7440-18-8, Ruthenium, uses 7440-32-6, Titanium, uses 7440-47-3, Chromium, uses 7440-48-4, Cobalt, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 7440-62-2, Vanadium, uses 7440-67-7, Zirconium, uses 7440-74-6, Indium, uses 25067-54-3, Polyfuran 25067-58-7, Polyacetylene 25233-30-1, PoLyaniline 25233-34-5, Polythiophene 25340-17-4, Diethylbenzene 26009-24-5, Poly(p-phenylene vinylene) 30604-81-0, Polypyrrole 62309-51-7, Propanol **126213-51-2**, Polyethylenedioxythiophene
(gas diffusion layer containing inherently conductive polymer for fuel cells)

L41 ANSWER 2 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:433703 HCAPLUS
DOCUMENT NUMBER: 141:9611
TITLE: Enzyme immobilization for use in biofuel cells and sensors
INVENTOR(S): Minteer, Shelley D.; Akers, Niki L.; Moore, Christine M.
PATENT ASSIGNEE(S): St. Louis University, USA
SOURCE: U.S. Pat. Appl. Publ., 33 pp., which
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004101741	A1	20040527	US 2003-617452 <--	2003 0711
CA 2507455	AA	20040617	CA 2003-2507455 <--	2003 1121
WO 2004051774	A2	20040617	WO 2003-US37336 <--	2003 1121
WO 2004051774	A3	20041125		

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MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,
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GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003297552	A1	20040623	AU 2003-297552	2003 1121 <--
EP 1565957	A2	20050824	EP 2003-812443	2003 1121 <--
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JP 2006508519	T2	20060309	JP 2004-570766	2003 1121 <--
PRIORITY APPLN. INFO.:			US 2002-429829P	P 2002 1127 <--
			US 2003-486076P	P 2003 0710
			US 2003-617452	A 2003 0711
			WO 2003-US37336	W 2003 1121

OTHER SOURCE(S): MARPAT 141:9611

AB Disclosed are bioanodes comprising a quaternary ammonium treated Nafion polymer membrane and a dehydrogenase incorporated within the treated Nafion polymer. The dehydrogenase catalyzes the oxidation of an organic fuel and reduces an adenine dinucleotide. The ion conducting polymer membrane lies juxtaposed to a polymethylene green redox polymer membrane, which serves to electro-oxidize the reduced adenine dinucleotide. The bioanode is used in a fuel cell to produce high power densities.

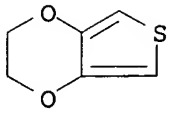
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(enzyme immobilization for use in biofuel cells and sensors)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01M004-90
ICS H01M004-96; H01M008-10; C12N011-08
INCL 429043000; 429044000; 429042000; 429030000; 429013000; 435180000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 7, **38**
IT 61-73-4, Methylene blue 92-31-9, Toluidine blue o 92-82-0D, Phenazine, derivs. 92-84-2, Phenothiazine 98-86-2, Acetophenone, uses 135-67-1, Phenoxazine 139-85-5, 3,4-Dihydroxybenzaldehyde 521-31-3, **Luminol** 531-53-3, Azure A 531-55-5, Azure B 553-24-2, Neutral red 2381-85-3, Nile blue 2679-01-8, Methylene green 3625-57-8, Nile blue A 7440-04-2D, Osmium, phenanthrolinedione 9003-01-4, Polyacrylic acid 25013-01-8, Polypyridine 25233-30-1, Polyaniline 25233-34-5, Polythiophene 25265-76-3, Diaminobenzene 27318-90-7, 1,10-Phenanthroline-5,6-dione 30604-81-0, Polypyrrole 37251-80-2, Toluidine blue 38096-29-6, Diaminopyridine 51878-01-4 54258-43-4, 1,10-Phenanthroline-5,6-diol 68455-94-7D, Nitrofluorenone, derivs. 74485-93-1, Poly(difluoroacetylene) 86090-24-6, Brilliant cresyl blue 87257-37-2, Polythionine 103737-36-6, Toluene blue 104934-50-1, Poly(3-hexylthiophene) **126213-51-2**, Poly(3,4-ethylenedioxythiophene) 142189-51-3, Poly(thieno[3,4-b]thiophene 150645-85-5, Poly(neutral red) 150645-86-6, Poly(methylene blue) 153312-51-7, Poly(3-(4-fluorophenyl)thiophene 161201-31-6 193265-88-2, Phenothiazin-5-ium, 3-(dimethylamino)-7-(methylamino)-, chloride homopolymer 259737-85-4, Poly(3,4-ethylenedioxypyrrole) 308284-47-1, Benzo[a]phenoxazin-7-ium, 5-amino-9-(diethylamino)-, sulfate (2:1) homopolymer 692776-93-5
(enzyme immobilization for use in biofuel cells and sensors)
IT 50-00-0, Formaldehyde, uses 50-28-2, Estradiol, uses 50-99-7, D-Glucose, uses 53-57-6, NADPH 56-73-5, Glucose-6-**phosphate** 56-81-5, Glycerol, uses 57-60-3, Pyruvate, uses 58-22-0, Testosterone 58-68-4, NADH 60-33-3, Linoleic acid, uses 64-17-5, Ethanol, uses 64-20-0, TetramethylAmmonium bromide 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 71-47-6, Formate, uses 71-50-1, Acetate, uses 71-91-0, TetraethylAmmonium bromide 72-89-9, Acetyl co-a 75-07-0, Acetaldehyde, uses 78-83-1, Isobutanol, uses 79-33-4, uses 85-61-0, Coenzyme a, uses 87-78-5, Mannitol 96-41-3, Cyclopentanol 104-54-1, Cinnamyl alcohol 107-18-6, Allyl alcohol, uses 113-21-3, Lactate, uses 116-14-3D, Tetrafluoroethylene, copolymer, with perfluorosulfonic acid 116-31-4, Retinal 123-72-8, Butanal 126-44-3, Citrate, uses 149-61-1, Malate 151-21-3, Sodium dodecyl sulfate, uses 320-77-4 383-86-8, Glycerate 577-11-7, Sodium bis(2-ethylhexyl)sulfosuccinate 598-35-6, Lactaldehyde 608-59-3, Gluconate 633-96-5 820-11-1 866-97-7, TetrapentylAmmonium bromide 921-60-8, L-Glucose 1119-97-7, TetraDecyltrimethylammonium bromide 1333-74-0, Hydrogen, uses 1941-30-6, TetrapropylAmmonium bromide 2002-48-4, Glucuronate 2082-84-0, Decyltrimethylammonium bromide 3615-39-2, Sorbose 7664-41-7, Ammonia, uses 9001-37-0, Glucose oxidase 9001-60-9, Lactic dehydrogenase 9013-18-7, Acyl-CoA synthase 9014-20-4,

Pyruvate dehydrogenase 9028-53-9, Glucose dehydrogenase 9028-84-6, Formaldehyde dehydrogenase 9028-85-7, Formate dehydrogenase 9028-86-8, Aldehyde dehydrogenase 9031-72-5, Alcohol dehydrogenase 9035-82-9, Dehydrogenase 9055-15-6, Oxidoreductase 10326-41-7, uses 12124-97-9, Ammonium bromide 26264-14-2, Propanediol 26566-61-0, Galactose 29354-98-1, Hexadecanol 30237-26-4, Fructose 31103-86-3, Mannose 35296-72-1, Butanol 53414-64-5, Lactose dehydrogenase 58367-01-4, Glucose 62309-51-7, Propanol 66796-30-3, Nafion 117 163294-14-2, Nafion 112
(enzyme immobilization for use in biofuel cells and sensors)

L41 ANSWER 3 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:372661 HCAPLUS
DOCUMENT NUMBER: 140:397166
TITLE: **Electroluminescent** metallo-supramolecules with terpyridine-based groups
INVENTOR(S): Che, Chi-Ming; Yu, Sze-Chit
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: U.S. Pat. Appl. Publ., 27 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004086744	A1	20040506	US 2002-290120 <--	2002 1106
WO 2004041913	A1	20040521	WO 2003-CN891 <--	2003 1023
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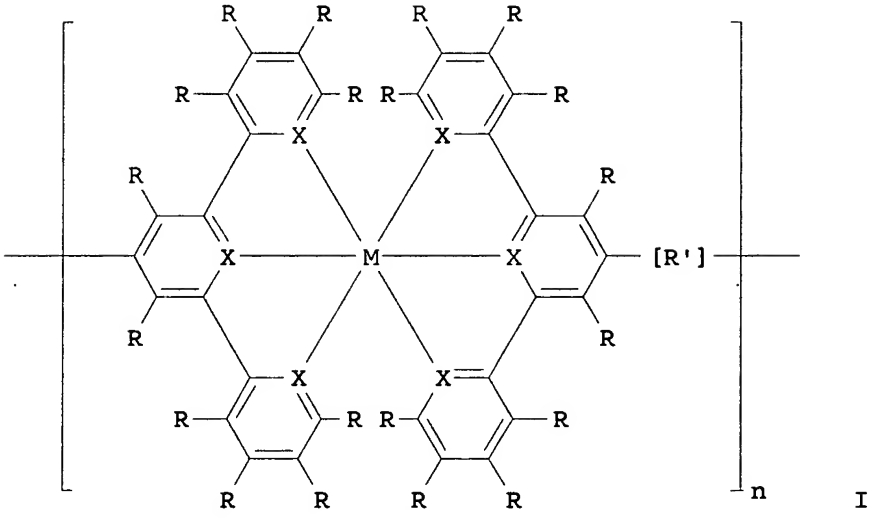
1023

GI



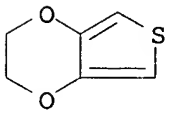
I

AB Supramols. are described by the general formula I. Preferably, M represents Group IB, IIB VIIA, VIIIA, or lanthanide metals; R is independently selected from the group consisting of hydrogen, halogen, alkyl, substituted alkyl, aryl, substituted aryl, or recognized donor and acceptor groups; X is independently selected from N or C; R' is selected from alkoxy, aryloxy, heteroaryloxy, alkyl, aryl, heteroaryl, alkyl ketone, aryl ketone, heteroaryl ketone, alkylester, arylester, heteroarylester, alkylamide, arylamide, heteroarylamide, alkylthio, arylthio, fluoroalkyl, fluoroaryl, amine, imide, carboxylate, sulfonyl, alkyleneoxy, polyalkyleneoxy, or combination thereof; n is an integer of 1 to 100,000; Z is a counter ion and is selected from the group of acetate, acetylacetonate, cyclohexanebutyrate, ethylhexanoate, halide, **hexafluorophosphate**, hexafluoroacetylacetonate, nitrate, perchlorate, **phosphate**, sulfate, tetrafluoroborate or fluoromethanesulfonate; and y = 0 to 4. Methods for preparing the compds. by heating a terpyridine derivative with a metal, and **electroluminescent** devices incorporating the compds., are also described.

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(polystyrene sulfonate-doped; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H05B033-14
ICS C09K011-06
INCL 428690000; 428917000; 313504000; 313506000; 257040000; 252301350; 252301160
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 72, 76, 78
ST **electroluminescent** device metal terpyridine deriv complex polymer
IT **Electroluminescent** devices
Luminescent substances
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT Polyanilines
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT Coordination compounds
(polymeric; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT Aluminum alloy, nonbase
Calcium alloy, nonbase
Lithium alloy, nonbase
Magnesium alloy, nonbase
Silver alloy, nonbase
Sodium alloy, nonbase
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 1332-29-2, Tin oxide
(fluorine-doped; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 7429-90-5, Aluminum, uses 7439-93-2, Lithium, uses 7439-95-4, Magnesium, uses 7440-22-4, Silver, uses 7440-23-5, Sodium, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 7440-70-2, Calcium, uses 50926-11-9, ITO
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 680992-43-2P 680992-45-4P
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)

IT 680992-73-8P
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 557-34-6, Zinc acetate 17084-13-8, Potassium **hexafluorophosphate** 58345-97-4, 4'-Phenyl-2,2':6',2''-terpyridine 89972-76-9, 4'-(4-Bromophenyl)-2,2':6',2''-terpyridine 89972-79-2 211692-94-3
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 680992-33-0P 680992-35-2P 680992-37-4P 680992-38-5P 680992-39-6P 680992-41-0P 680992-47-6P
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 133598-57-9P
(metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 50851-57-5
(polyethylene dioxythiophene doped with; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 680992-51-2P 688006-31-7P
(polymeric; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 680992-54-5P 680992-56-7P 680992-59-0P 680992-61-4P 680992-64-7P 680992-67-0P 680992-71-6P
(polymeric; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(polystyrene sulfonate-doped; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)
IT 7782-41-4, Fluorine, uses
(tin oxide doped with; metal-terpyridine derivative complex polymers and their preparation and **electroluminescent** devices using them)

L41 ANSWER 4 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:252786 HCAPLUS
DOCUMENT NUMBER: 140:295941
TITLE: Organic photosensitive optoelectronic device
INVENTOR(S): Lazarev, Pavel I.; Nazarov, Victor V.
PATENT ASSIGNEE(S): Optiva, Inc., USA
SOURCE: PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004025705	A2	20040325	WO 2003-US28778	2003 0911
			<--	
WO 2004025705	A3	20041111		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,
PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG

US 2004067324	A1	20040408	US 2003-656578	2003 0904 <--
AU 2003282796	A1	20040430	AU 2003-282796	2003 0911 <--
PRIORITY APPLN. INFO.:			US 2002-410514P	P 2002 0913 <--
			US 2003-656578	A 2003 0904
			WO 2003-US28778	W 2003 0911

AB The present invention generally relates to organic thin-film photosensitive optoelectronic devices. More specifically, the present invention is directed to organic photosensitive optoelectronic devices intended for converting radiation into electricity and particularly for converting solar energy into elec. energy (**solar cells**), and to organic photosensitive optoelectronic devices intended for signal detection (photoconductors cell and photodetectors). An organic optoelectronic device is provided which comprises a multi-**layer structure** and a substrate. The multi-**layer structure** is comprised of a 1st electrode layer, a 2nd electrode layer, and at least one organic **photoelec.** layer. The organic **photoelec.** layer is an anisotropically absorbing and elec. conducting layer and comprised of rodlike supramols. which comprise at least one polycyclic organic compound with a conjugated p-system, has a globally ordered crystal structure with an intermol. spacing of 3.4 ± 0.3 Å along a polarization axis of the organic **photoelec** . layer, and absorbs electromagnetic radiation in a predetd. spectral subrange of .apprx.200-3000 nm. The multi-**layer structure** is formed on 1 side of the substrate. At least one of the 1st and 2nd electrodes is transparent for the electromagnetic radiation to which the optoelectronic device is sensitive.

IT **155090-83-8**, PEDOT-PSS
(organic photosensitive optoelectronic device)

RN 155090-83-8 HCAPLUS

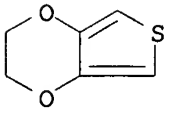
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-51-2
CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S



CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS

D1— CH═ CH_2

D1— SO_3H

IC ICM H01L
CC 76-5 (Electric Phenomena)
Section cross-reference(s): 52, 73, 75
IT Electric contacts
Optoelectronic semiconductor devices
Photoelectric devices
Semiconductor device fabrication
(organic photosensitive optoelectronic device)
IT 147-14-8, Copper phthalocyanine 50926-11-9, Indium tin oxide
155090-83-8, PEDOT-PSS
(organic photosensitive optoelectronic device)

L41 ANSWER 5 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:203262 HCAPLUS
DOCUMENT NUMBER: 140:244625

TITLE: Porous metal oxide semiconductor spectrally sensitized with metal oxide
INVENTOR(S): Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004046168	A1	20040311	US 2003-630492 <--	2003 0730
WO 2004017345	A1	20040226	WO 2003-EP50345 <--	2003 0729
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003262549	A1	20040303	AU 2003-262549 <--	2003 0729
JP 2006500764	T2	20060105	JP 2004-528513 <--	2003 0729

PRIORITY APPLN. INFO.:		
EP 2002-102131	A	2002 0813
US 2002-406358P	P	2002 0827
WO 2003-EP50345	W	2003 0729

AB A porous metal oxide semiconductor (e.g., TiO2) with a band gap of greater than 2.9 eV spectrally sensitized on its internal and external surface with one or more metal oxides with a band-gap of less than 2.9 eV (e.g., V2O5, Fe2O3 or CuO) or a mixture thereof; a process for spectrally sensitizing a nano-porous metal oxide with a band-gap of greater than 2.9 eV on its internal and external

surface comprising the steps of: providing a nano-porous metal oxide with a band gap of greater than 2.9 eV, applying a solution of a metal compound or salt which upon pyrolysis or upon hydrolysis and subsequent pyrolysis yields. A metal oxide with a band-gap of less than 2.9 eV and heating the nano-porous metal oxide with a band-gap of greater than 2.9 eV to which the metal salt had been applied to pyrolyze or hydrolyze and subsequently pyrolyze the salt to the metal oxide with a band-gap of less than 2.9 eV; and a second process for spectrally sensitizing a nano-porous metal oxide with a band-gap of greater than 2.9 eV on its internal and external surface comprising the steps of: (i) preparing a solution containing a metal compound or salt that pyrolyzes or hydrolyzes and subsequently pyrolyzes to a metal oxide semiconductor with a band-gap of greater than 2.9 eV and a metal compound or salt that pyrolyzes or hydrolyzes and subsequently pyrolyzes to a metal oxide with a band-gap of less than 2.9 eV, (ii) adding a water-soluble polymer to the solution prepared in step (i), (iii) coating the solution prepared in step (ii) on a support, and (iv) heating the coated support prepared in step (iii) to a temperature at which the water-soluble polymer is no longer present in the coating support.

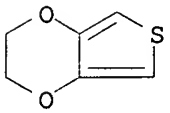
IT **126213-51-2**, Poly(3,4-ethylenedioxy-thiophene)
(porous metal oxide semiconductor such as titanium dioxide spectrally sensitized with metal oxide)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

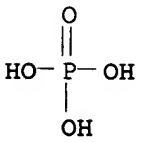
CRN 126213-50-1
CMF C6 H6 O2 S



IT **7664-38-2, Phosphoric acid**, uses
(porous metal oxide semiconductor such as titanium dioxide spectrally sensitized with metal oxide)

RN 7664-38-2 HCAPLUS

CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM H01L029-12
INCL 257043000
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 52, 72
IT Band gap
Coating process
Heating

Hydrolysis
Ink-jet printing
Light sensitization
Photoelectric devices
Photoelectrochemical cells
Screen printing
Semiconductor materials
Thermal decomposition
(porous metal oxide semiconductor such as titanium dioxide spectrally sensitized with metal oxide)

IT **Phosphates**, uses
Phosphites
Polyphosphates
Polyphosphoric acids
(porous metal oxide semiconductor such as titanium dioxide spectrally sensitized with metal oxide)

IT 50851-57-5, Poly(styrene sulfonic acid) 50926-11-9, Indium tin oxide **126213-51-2**, Poly(3,4-ethylenedioxy-thiophene)
(porous metal oxide semiconductor such as titanium dioxide spectrally sensitized with metal oxide)

IT 2466-09-3, **Diphosphoric acid 7664-38-2**, **Phosphoric acid**, uses 10343-62-1, **Metaphosphoric acid** 10380-08-2, **Triphosphoric acid** 13598-36-2, Phosphorous acid, uses 13813-62-2, **Tetraphosphoric acid** 14332-09-3, Hypophosphorous acid
(porous metal oxide semiconductor such as titanium dioxide spectrally sensitized with metal oxide)

L41 ANSWER 6 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:198222 HCAPLUS
DOCUMENT NUMBER: 140:209008
TITLE: Production of organic electronic circuits by contact printing techniques
INVENTOR(S): Zschieschang, Ute; Halik, Marcus; Klauk, Hagen; Schmid, Guenter
PATENT ASSIGNEE(S): Infineon Technologies A.-G., Germany
SOURCE: Ger. Offen., 13 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10240105	A1	20040311	DE 2002-10240105 <--	20020830
DE 10240105	B4	20050324		
WO 2004021751	A1	20040311	WO 2003-DE2837 <--	20030825
W: CN, JP, KR, SG, US RW: DE, FR, GB, IE, IT, NL				
EP 1532851	A1	20050525	EP 2003-790746	2003

0825
<--
EP 1532851 B1 20060308
R: DE, FR, GB, IT, NL, IE
US 2005163932 A1 20050728 US 2005-66550
2005
0228
<--
PRIORITY APPLN. INFO.: DE 2002-10240105 A
2002
0830
<--
WO 2003-DE2837 W
2003
0825

AB The invention concerns a procedure for the production of an organic conductor on a substrate, whereby into a hydrophobic structured print stamp a solution containing organic conductive polymer is loaded and brought into contact with a hydrophilic substrate to form a **structured layer** of the organic polymer on the substrate. By selection of suitable geometry for the print stamp and the substrate, the procedure can be operated continuously.

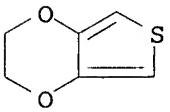
IT **126213-51-2**, PEDOT
(production of organic electronic circuits by contact printing techniques)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01L051-40

CC 76-14 (Electric Phenomena)
Section cross-reference(s): 38, 74

IT Conducting polymers
Electric circuits
Field effect **transistors**
Photoresists
Printing (impact)
(production of organic electronic circuits by contact printing techniques)

IT 9003-53-6, Polystyrene 9020-32-0 9020-73-9, Polyethylene naphthalate 25036-53-7, Kapton 25038-81-7 **126213-51-2**, PEDOT
(production of organic electronic circuits by contact printing techniques)

L41 ANSWER 7 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:182945 HCAPLUS

DOCUMENT NUMBER: 140:244597
TITLE: Conducting film configuration with improved stability to sunlight exposure
INVENTOR(S): Louwet, Frank; Van Dyck, Geert; Loccufier, Johan; Groenendaal, Bert; Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004018560	A1	20040304	WO 2003-EP50347	2003 0729
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003262551	A1	20040311	AU 2003-262551	2003 0729
			<--	
EP 1551921	A1	20050713	EP 2003-792428	2003 0729
			<--	
EP 1551921	B1	20060329		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006505099	T2	20060209	JP 2004-530268	2003 0729
			<--	
PRIORITY APPLN. INFO.:			EP 2002-102217 A	2002 0823
			<--	
			WO 2003-EP50347 W	2003 0729

AB Elec. conducting layers containing poly(3,4-dialkoxythiophene) and a polyanion are claimed which do not undergo a rapid increase in their surface resistance on exposure to sunlight. A **layer**

configuration on a support, the **layer configuration** comprises a layer containing a polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units, in which the two alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of **polyphosphoric acids, polyphosphoric acid** salts, thia-alkanedicarboxylic acids, to cyclohexadiene compds. and polyhydroxy-compds. selected from the group consisting of tetronic acid derivs.; ortho dihydroxybenzene compds. with at least one sulfo group, compds. according to (I): HO-CH2-CH(OH)-(CH2)m-S-CH2-C(R1)(R2)-CH2-S-(CH2)n-CH(OH)-CH2-OH, wherein R1 and R2 are independently H, -OH or alkyl, and n and m are independently 1, 2 or 3; compds. according to (II): HO-(CH2)p-S-CH2-S-(CH2)q-OH, wherein p and q are independently 2, 3 or 4; compds. hydrolyzable to tetronic acid derivs.; compds. hydrolyzable to compds. according to I; and sulfo-substituted 2-thia-alkylbenzimidazole compds.

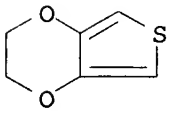
IT **126213-51-2**, PEDOT
(conducting film configuration with improved stability to sunlight exposure)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

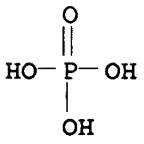
CRN 126213-50-1
CMF C6 H6 O2 S



IT **7664-38-2**, **Phosphoric acid**, processes
(conducting film configuration with improved stability to sunlight exposure)

RN 7664-38-2 HCAPLUS

CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)

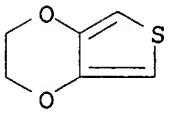


IT **126213-51-2D**, Poly(3,4-ethylenedioxythiophene), derivs.
126213-52-3, Poly(3,4-methylenedioxythiophene)
126213-52-3D, Poly(3,4-methylenedioxythiophene), derivs.
150504-14-6, Poly(3,4-propylenedioxythiophene)
150504-14-6D, Poly(3,4-propylenedioxythiophene), derivs.
202927-42-2, Poly(3,4-butylenedioxythiophene)
202927-42-2D, Poly(3,4-butylenedioxythiophene), derivs.
667430-64-0
(conducting film configuration with improved stability to

sunlight exposure)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

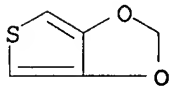
CRN 126213-50-1
CMF C6 H6 O2 S



RN 126213-52-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxole, homopolymer (9CI) (CA INDEX NAME)

CM 1

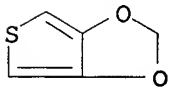
CRN 251-37-6
CMF C5 H4 O2 S



RN 126213-52-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxole, homopolymer (9CI) (CA INDEX NAME)

CM 1

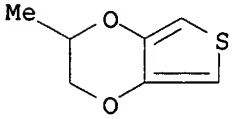
CRN 251-37-6
CMF C5 H4 O2 S



RN 150504-14-6 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

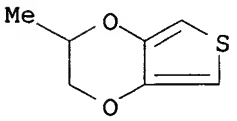
CRN 126235-11-8
CMF C7 H8 O2 S



RN 150504-14-6 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

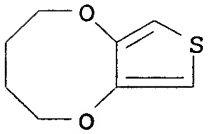
CRN 126235-11-8
CMF C7 H8 O2 S



RN 202927-42-2 HCAPLUS
CN Thieno[3,4-b][1,4]dioxocin, 2,3,4,5-tetrahydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

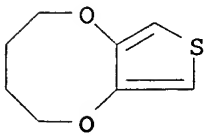
CRN 202927-41-1
CMF C8 H10 O2 S



RN 202927-42-2 HCAPLUS
CN Thieno[3,4-b][1,4]dioxocin, 2,3,4,5-tetrahydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

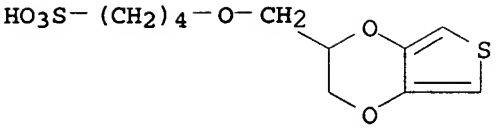
CRN 202927-41-1
CMF C8 H10 O2 S



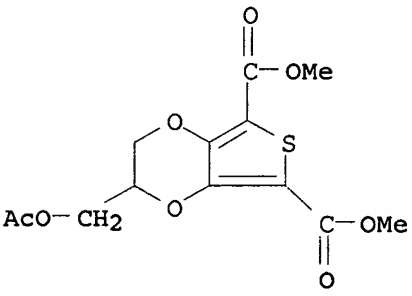
RN 667430-64-0 HCAPLUS
CN 1-Butanesulfonic acid, 4-[(2,3-dihydrothieno[3,4-b]-1,4-dioxin-2-yl)methoxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

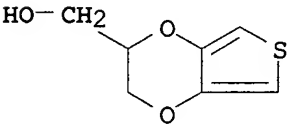
CRN 667430-63-9
CMF C11 H16 O6 S2



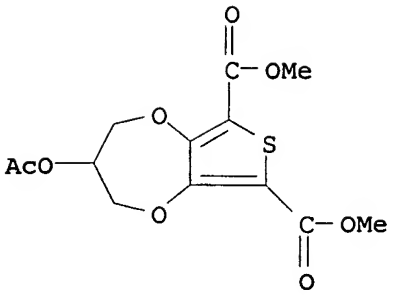
IT **540803-64-3P**
(preparation and reactions of)
RN 540803-64-3 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-5,7-dicarboxylic acid, 2-[(acetyloxy)methyl]-2,3-dihydro-, dimethyl ester (9CI) (CA INDEX NAME)



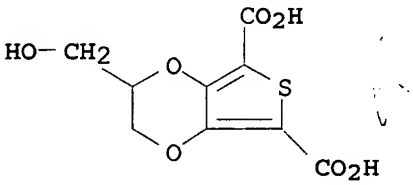
IT **146796-02-3P**
(preparation and reactions of)
RN 146796-02-3 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-2-methanol, 2,3-dihydro- (9CI) (CA INDEX NAME)



IT **540803-65-4P**
(preparation of)
RN 540803-65-4 HCAPLUS
CN 2H-Thieno[3,4-b][1,4]dioxepin-6,8-dicarboxylic acid, 3-(acetyloxy)-, dimethyl ester (9CI) (CA INDEX NAME)



IT **146796-14-7P**
(preparation of)
RN 146796-14-7 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-5,7-dicarboxylic acid, 2,3-dihydro-2-(hydroxymethyl)- (9CI) (CA INDEX NAME)



IC ICM C08L065-00
ICS C08G061-12; C08K005-49
CC 76-2 (Electric Phenomena)
IT **Electroluminescent** devices
Photoelectric devices
Solar cells
Thin film **transistors**
(conducting film configuration with improved stability to sunlight exposure)
IT **Electroluminescent** devices
(displays; conducting film configuration with improved stability to sunlight exposure)
IT **Luminescent** screens
(**electroluminescent**; conducting film configuration with improved stability to sunlight exposure)
IT 2530-83-8, 3-Glycidoxypropyltrimethoxysilane **126213-51-2**, PEDOT
(conducting film configuration with improved stability to sunlight exposure)
IT 50-81-7, L-Ascorbic acid, processes 111-17-1 111-46-6, Diethyleneglycol, processes 149-45-1 872-50-4, processes 5065-18-9 **7664-38-2**, **Phosphoric acid**, processes 15042-01-0 25038-59-9, Polyethyleneterephthalate, processes 44860-68-6 86249-75-4 88307-06-6 138578-42-4 172027-95-1 667430-62-8
(conducting film configuration with improved stability to sunlight exposure)
IT **126213-51-2D**, Poly(3,4-ethylenedioxythiophene), derivs.
126213-52-3, Poly(3,4-methylenedioxythiophene)
126213-52-3D, Poly(3,4-methylenedioxythiophene), derivs.

150504-14-6, Poly(3,4-propylenedioxythiophene)
150504-14-6D, Poly(3,4-propylenedioxythiophene), derivs.
202927-42-2, Poly(3,4-butylenedioxythiophene)
202927-42-2D, Poly(3,4-butylenedioxythiophene), derivs.
667430-64-0
(conducting film configuration with improved stability to sunlight exposure)

IT **540803-64-3P**
(preparation and reactions of)

IT **146796-02-3P** **204444-01-9P**
(preparation and reactions of)

IT **540803-65-4P**
(preparation of)

IT **146796-14-7P**
(preparation of)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 8 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:182587 HCAPLUS
DOCUMENT NUMBER: 140:236722
TITLE: **Layer configuration** comprising an electron-blocking element
INVENTOR(S): Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004044214	A1	20040304	US 2003-638918	2003 0811
			<--	
US 7056600	B2	20060606		
WO 2004019346	A1	20040304	WO 2003-EP50341	2003 0729
			<--	

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003262545	A1	20040311	AU 2003-262545	2003 0729

PRIORITY APPLN. INFO.:

<--		
EP 2002-102216	A	2002 0823
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US 2002-409731P	P	2002 0911
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EP 2003-100327	A	2003 0213
WO 2003-EP50341	W	2003 0729

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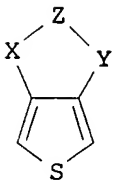


I

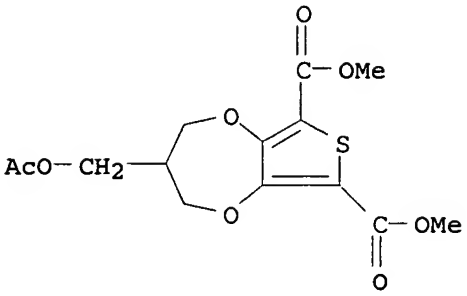
AB **Layered structures** comprising a nonphotoactive element formed from compds. other than poly(3,4-alkylenedioxythiophene)s and poly(3,4-dialkoxythiophene)s are described in which the structures include a first polymer containing structural units are described by the general formula I (X and Y = independently selected O, S, N-R1; Z = -(CH2)m CR2R3-(CH2)n-; R1 = aryl, C1-18 alkyl, or H; R2 = H or -(CH2)s-O-(CH2)p -SO3-M+ ; R3 = -(CH2)s-O-(CH2)p-SO3-M+; M+ = a cation; m = 0-3; n = 0-3; s = 0-10; and p = 1-18) and a second polymer different from the first polymer and selected from the group consisting of optionally quaternized polyamine-polymers, polysulfo-polymers, **polyphosphoric acids** and **polyphosphoric acid** salts, the surface of one side of the element being contiguous with a pos. electrode and the surface on the opposite side of the element being contiguous with a hole-transporting material. The layers are capable of reducing hole-electron recombination at the pos. electrode thereby increasing the efficiency and lifetime of **electronic devices** containing such **layered structures.** **Electroluminescent** devices, especially **light-emitting** diodes, **transistors**, and photovoltaic devices (e.g., **solar cells**) including the structures are also described.

IT **667420-85-1P**
(**layered structures** with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)

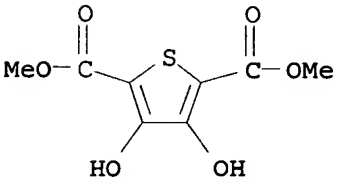
RN 667420-85-1 HCAPLUS

CN 2H-Thieno[3,4-b][1,4]dioxepin-6,8-dicarboxylic acid, 3-[(acetyloxy)methyl]-3,4-dihydro-, dimethyl ester (9CI) (CA

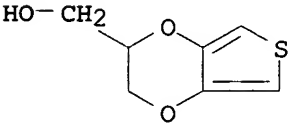
INDEX NAME)



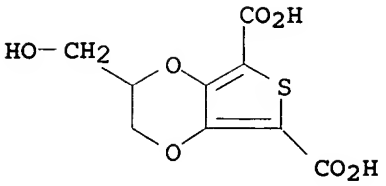
IT **58416-04-9**
(layered structures with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)
RN 58416-04-9 HCAPLUS
CN 2,5-Thiophenedicarboxylic acid, 3,4-dihydroxy-, dimethyl ester (6CI, 9CI) (CA INDEX NAME)



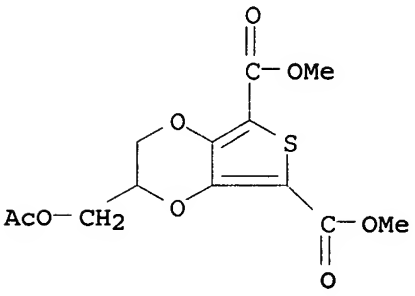
IT **146796-02-3P 146796-14-7P 540803-64-3P**
(layered structures with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)
RN 146796-02-3 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-2-methanol, 2,3-dihydro- (9CI) (CA INDEX NAME)



RN 146796-14-7 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-5,7-dicarboxylic acid, 2,3-dihydro-2-(hydroxymethyl)- (9CI) (CA INDEX NAME)



RN 540803-64-3 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-5,7-dicarboxylic acid, 2-[(acetyloxy)methyl]-2,3-dihydro-, dimethyl ester (9CI) (CA INDEX NAME)



IC ICM C07D211-02
INCL 546185000
CC 38-3 (**Plastics** Fabrication and Uses)
Section cross-reference(s): 52, 73, 76
ST polythiophene deriv layer hole electron recombination control **electronic device; solar cell**
polythiophene deriv layer hole electron recombination control; **electroluminescent** device polythiophene deriv layer hole electron recombination control; **transistor** polythiophene deriv layer hole electron recombination control; photovoltaic device polythiophene deriv layer hole electron recombination control
IT **Electroluminescent** devices
Photoelectric devices
Solar cells
Transistors
(**layered structures** with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)
IT Conducting polymers
(polythiophenes; **layered structures** with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)
IT **667420-85-1P**
(**layered structures** with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)
IT 30619-16-0, Acrylamide-4-vinylpyridine copolymer 50851-57-5, Poly(styrenesulphonic acid) 667455-83-6, Acrylamide-N-vinylimidazole-4-vinylpyridine copolymer
(**layered structures** with polythiophene

derivative-containing layers for hole-electron recombination control and **electronic devices** using them)

IT 204444-03-1P
(**layered structures** with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)

IT 3132-64-7, Epibromohydrin **58416-04-9**
(**layered structures** with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)

IT 1633-83-6P, Butanesultone 7646-69-7P, Sodium hydride (NaH) **146796-02-3P 146796-14-7P** 204444-01-9P **540803-64-3P**
(**layered structures** with polythiophene derivative-containing layers for hole-electron recombination control and **electronic devices** using them)

L41 ANSWER 9 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:182502 HCAPLUS
DOCUMENT NUMBER: 140:236721
TITLE: **Layer configuration** with improved stability to sunlight exposure
INVENTOR(S): Louwet, Frank; Dyck, Geert Van; Loccufier, Johan; Groenendaal, Bert; Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004043895	A1	20040304	US 2003-642933 <--	2003 0818
PRIORITY APPLN. INFO.:			EP 2002-102217 <--	A 2002 0823
			US 2002-409794P <--	P 2002 0911

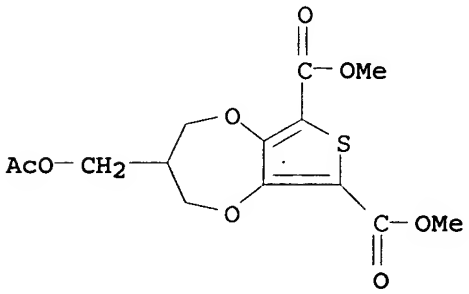
OTHER SOURCE(S): MARPAT 140:236721
AB **Layered structures** comprising a layer containing a polymer containing optionally substituted 3,4-alkylenedioxythiophene structural units, in which the alkoxy groups may be the same or different or together represent an optionally substituted oxy-alkylene-oxy bridge, and a compound selected from the group consisting of **polyphosphoric acids**, **polyphosphoric acid** salts, thia-alkanedicarboxylic acids, cyclohexadiene compds. and polyhydroxy-compds. selected from the group consisting of tetronic acid derivs., ortho-dihydroxybenzene compds. with ≥1 sulfo group, compds. described by the general formula

HO-CH2-CH(OH)-(CH2)m-S-CH2-C(R1)(R2)-CH2-S-(CH2)n-CH(OH)-CH2-OH (I: R1 and R2 = independently selected H, -OH, or alkyl; n = 1, 2, or 3; and m = 1, 2 or 3); compds. described by the general formula HO-(CH2)p-S-CH2-S-(CH2)q-OH (p = 2,3, or 4; q = 2, 3 or 4), compds. hydrolyzable to tetronic acid derivs., compds. hydrolyzable to compds. described by the general formula I; and sulfo-substituted 2-thia-alkyl-benzimidazole compds. The layers are capable of reducing hole-electron recombination at the pos. electrode thereby increasing the efficiency and lifetime of **electronic devices** containing such **layered structures**. **Electroluminescent** devices, especially **light-emitting** diodes, **transistors**, and photovoltaic devices (e.g., **solar cells**) including the structures are also described.

IT **667420-85-1P**
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

RN 667420-85-1 HCAPLUS

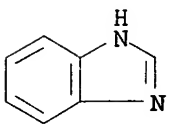
CN 2H-Thieno[3,4-b][1,4]dioxepin-6,8-dicarboxylic acid, 3-[(acetyloxy)methyl]-3,4-dihydro-, dimethyl ester (9CI) (CA INDEX NAME)



IT **51-17-2D**, Benzimidazole, thiaalkyl derivs. **4971-56-6D**, Tetronic acid, derivs. **29797-09-9D**, Cyclohexadiene, derivs.
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

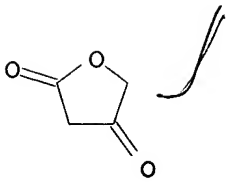
RN 51-17-2 HCAPLUS

CN 1H-Benzimidazole (9CI) (CA INDEX NAME)



RN 4971-56-6 HCAPLUS

CN 2,4(3H,5H)-Furandione (8CI, 9CI) (CA INDEX NAME)



RN 29797-09-9 HCAPLUS
CN Cyclohexadiene (8CI, 9CI) (CA INDEX NAME)

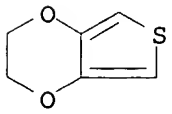
CM 1

CRN 71-43-2
CMF C6 H6

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
126213-51-2D, Poly(3,4-ethylenedioxythiophene), derivs.
126213-52-3, Poly(3,4-methylenedioxythiophene)
126213-52-3D, Poly(3,4-methylenedioxythiophene), derivs.
150504-14-6, Poly(3,4-propylenedioxythiophene)
150504-14-6D, Poly(3,4-propylenedioxythiophene), derivs.
202927-42-2, Poly(3,4-butylenedioxythiophene)
202927-42-2D, Poly(3,4-butylenedioxythiophene), derivs.
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

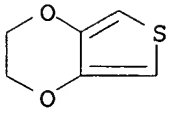
CRN 126213-50-1
CMF C6 H6 O2 S



RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

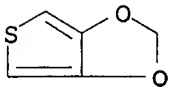
CRN 126213-50-1
CMF C6 H6 O2 S



RN 126213-52-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxole, homopolymer (9CI) (CA INDEX NAME)

CM 1

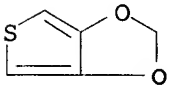
CRN 251-37-6
CMF C5 H4 O2 S



RN 126213-52-3 HCAPLUS
CN Thieno[3,4-d]-1,3-dioxole, homopolymer (9CI) (CA INDEX NAME)

CM 1

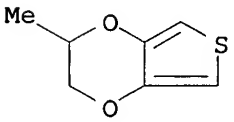
CRN 251-37-6
CMF C5 H4 O2 S



RN 150504-14-6 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-2-methyl-, homopolymer (9CI)
(CA INDEX NAME)

CM 1

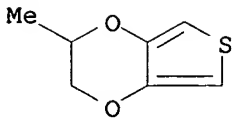
CRN 126235-11-8
CMF C7 H8 O2 S



RN 150504-14-6 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-2-methyl-, homopolymer (9CI)
(CA INDEX NAME)

CM 1

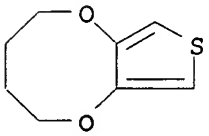
CRN 126235-11-8
CMF C7 H8 O2 S



RN 202927-42-2 HCAPLUS
CN Thieno[3,4-b][1,4]dioxocin, 2,3,4,5-tetrahydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

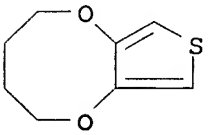
CRN 202927-41-1
CMF C8 H10 O2 S



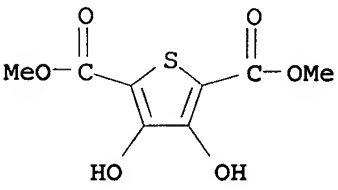
RN 202927-42-2 HCAPLUS
CN Thieno[3,4-b][1,4]dioxocin, 2,3,4,5-tetrahydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 202927-41-1
CMF C8 H10 O2 S



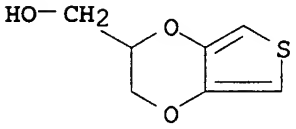
IT **58416-04-9**
(layered structures with improved stability to sunlight exposure and **electronic devices** using them)
RN 58416-04-9 HCAPLUS
CN 2,5-Thiophenedicarboxylic acid, 3,4-dihydroxy-, dimethyl ester (6CI, 9CI) (CA INDEX NAME)



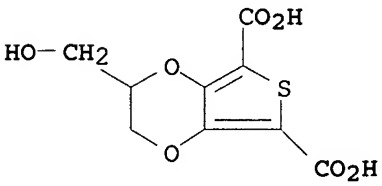
IT **146796-02-3P 146796-14-7P 540803-64-3P**
(layered structures with improved stability

to sunlight exposure and **electronic devices** using them)

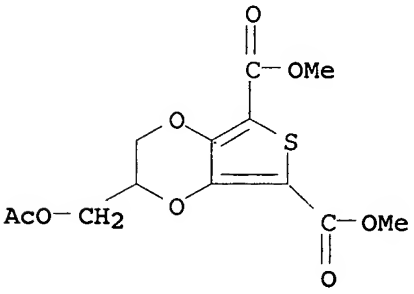
RN 146796-02-3 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-2-methanol, 2,3-dihydro- (9CI) (CA INDEX NAME)



RN 146796-14-7 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-5,7-dicarboxylic acid, 2,3-dihydro-2-(hydroxymethyl)- (9CI) (CA INDEX NAME)



RN 540803-64-3 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin-5,7-dicarboxylic acid, 2-[(acetyloxy)methyl]-2,3-dihydro-, dimethyl ester (9CI) (CA INDEX NAME)



IC ICM B01J031-00
INCL 502159000
CC 38-3 (**Plastics** Fabrication and Uses)
Section cross-reference(s): 52, 73, 76
ST polythiophene deriv layer light resistance **electronic device**; **solar cell** polythiophene deriv layer light resistance; **electroluminescent** device polythiophene deriv layer light resistance; **transistor** polythiophene deriv layer light resistance; photovoltaic device polythiophene deriv layer light resistance
IT Carboxylic acids, uses
(dicarboxylic, thiaalkane; **layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT **Electroluminescent** devices
Photoelectric devices
Solar cells
Transistors
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT **Polyphosphates**
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT **Polyphosphoric acids**
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT Conducting polymers
(polythiophenes; **layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT **667420-85-1P**
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT **51-17-2D**, Benzimidazole, thiaalkyl derivs.
4971-56-6D, Tetronic acid, derivs. **29797-09-9D**, Cyclohexadiene, derivs.
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT 50851-57-5, Poly(styrene sulphonate)
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT 30619-16-0, Acrylamide-4-vinylpyridine copolymer
126213-51-2, Poly(3,4-ethylenedioxythiophene)
126213-51-2D, Poly(3,4-ethylenedioxythiophene), derivs.
126213-52-3, Poly(3,4-methylenedioxythiophene)
126213-52-3D, Poly(3,4-methylenedioxythiophene), derivs.
150504-14-6, Poly(3,4-propylenedioxythiophene)
150504-14-6D, Poly(3,4-propylenedioxythiophene), derivs.
202927-42-2, Poly(3,4-butylenedioxythiophene)
202927-42-2D, Poly(3,4-butylenedioxythiophene), derivs.
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT 204444-03-1P
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT 3132-64-7, Epibromohydrin **58416-04-9**
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

IT 1633-83-6P, Butanesultone 7646-69-7P, Sodium hydride (NaH)
146796-02-3P **146796-14-7P** 204444-01-9P
540803-64-3P
(**layered structures** with improved stability to sunlight exposure and **electronic devices** using them)

L41 ANSWER 10 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:78583 HCAPLUS
DOCUMENT NUMBER: 140:114276
TITLE: Battery structures, self-organizing devices and related methods
INVENTOR(S): Gozdz, Antoni S.; Holman, Richard K.; Loxley, Andrew; Wilkins, Ronnie
PATENT ASSIGNEE(S): A123 Systems, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U.S. Ser. No. 206,662.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004018431	A1	20040129	US 2003-354673 <--	2003 0130
US 2003099884	A1	20030529	US 2002-206662 <--	2002 0726
WO 2004068618	A2	20040812	WO 2004-US2829	2004 0130
WO 2004068618	A3	20050407		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI

PRIORITY APPLN. INFO.:			
US 2002-206662	A2	2002 0726	<--
US 2001-308360P	P	2001 0727	<--
US 2001-21740	A2	2001 1022	<--
US 2003-354673	A	2003 0130	

AB An electrochem. device includes a first electrode in elec. communication with a first current collector, a second electrode in elec. communication with a second current collector and a crosslinked solid polymer in contact with the first and second electrodes. At least one of the first and second electrodes includes a network of elec. connected particles comprising an electroactive material, and the particles of one electrode exert a repelling force on the other electrode when the first and second

electrodes are combined with an uncrosslinked precursor to the solid polymer.

IT **155090-83-8**, Baytron PH
(battery structures, self-organizing devices and related methods)

RN 155090-83-8 HCAPLUS

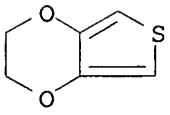
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-51-2
CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S

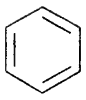


CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS



D1—CH=CH$_2$

D1—SO$_3$H

IC ICM H01M010-08
INCL 429309000; 252062200
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): **38**, 72
IT **Phosphate** glasses

(**borophosphate**; battery structures, self-organizing devices and related methods)

IT 1307-96-6, Cobalt monoxide, uses 1313-13-9, Manganese dioxide, uses 1313-99-1, Nickel monoxide, uses 1314-62-1, Vanadium pentoxide, uses 1317-34-6, Manganese oxide mn2o3 1317-35-7, Manganese oxide mn3o4 1344-43-0, Manganese monoxide, uses 1345-25-1, Iron monoxide, uses 7439-93-2, Lithium, uses 7439-93-2D, Lithium, intercalation compound 7440-21-3, Silicon, uses 7440-22-4, Silver, uses 7440-31-5, Tin, uses 7440-36-0, Antimony, uses 7440-42-8, Boron, uses 7440-44-0, Carbon, uses 7440-56-4, Germanium, uses 7440-66-6, Zinc, uses 7440-69-9, Bismuth, uses 7782-42-5, Graphite, uses 11126-15-1, Lithium vanadium oxide 12002-78-7 12031-65-1, Lithium nickel oxide linio2 12037-30-8, Vanadium oxide v6o11 12042-37-4, Alli 12048-27-0, BiLi 12057-17-9, Lithium manganese oxide limn2o4 12057-22-6, Lizn 12057-30-6 12057-33-9 12063-07-9, Iron lithium oxide fe2lio4 12162-79-7, Lithium manganese oxide limno2 12190-79-3, Cobalt lithium oxide colio2 12253-44-0 12338-02-2 13463-67-7, Titania, uses 13826-59-0, Lithium manganese **phosphate** limnpo4 15365-14-7, Iron lithium **phosphate** felipo4 18282-10-5, Tin dioxide 21651-19-4, Tin monoxide 25322-68-3D, Polyethylene glycol, hydroxy-terminated, condensation product with melamine 25322-68-3D, Polyethylene glycol, hydroxy-terminated, condensation product with phenolics. 25322-68-3D, Polyethylene glycol, hydroxy-terminated, reaction product with polyisocyanates 25322-68-3D, Polyethylene glycol, vinyl-terminated, hydrosilanation product with compds. containing multiple Si-H bonds 25721-76-0, Polyethylene glycol dimethacrylate 25736-86-1, Polyethylene glycol methacrylate 26403-58-7, Polyethylene glycol acrylate 26570-48-9, Polyethylene glycol diacrylate 26915-72-0, Methoxy polyethylene glycol methacrylate 37217-08-6, Lithium titanium oxide liti2o4 53262-48-9 55575-96-7, Lithium silicide Li13Si4 55608-41-8 56627-44-2 61812-08-6, Lithium silicide Li21Si8 66403-10-9, Lithium boride li5b4 67070-82-0 71012-86-7, Lithium boride li7b6 74083-26-4 76036-33-4, Lithium silicide Li12Si7 90076-65-6 106494-93-3, Lithium silicide Li21Si5 114778-10-8, Iron lithium sulfate fe2li2(SO4)3 496816-56-9

(battery structures, self-organizing devices and related methods)

IT 9002-84-0, Ptfe **155090-83-8**, Baytron PH 180049-13-2, Aluminum boride nitride albn

(battery structures, self-organizing devices and related methods)

L41 ANSWER 11 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:78581 HCAPLUS
DOCUMENT NUMBER: 140:131130
TITLE: Composite electrodes and encapsulated electrode particles for use in solid electrochemical devices
INVENTOR(S): Holman, Richard K.; Chiang, Yet-ming; Gozdz, Antoni S.; Loxley, Andrew; Nunes, Benjamin; Ostraat, Michele; Riley, Gilbert N.; Viola, Michael S.
PATENT ASSIGNEE(S): A123 Systems, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 28 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004018430	A1	20040129	US 2003-354405	2003 0130
			<--	
WO 2004011901	A2	20040205	WO 2003-US22954	2003 0722
			<--	
WO 2004011901	A3	20040624		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003281736	A1	20040216	AU 2003-281736	2003 0722
			<--	
PRIORITY APPLN. INFO.:			US 2002-398697P P	2002 0726
			<--	
			US 2003-354405 A	2003 0130
			WO 2003-US22954 W	2003 0722

AB The present invention relates generally to electrodes for use in electrochem. devices, and more particularly, to coated electrode particles for use in solid electrochem. cells, and to materials and systems for improving electronic conductivity and repulsive force characteristics of an electrode network. The present invention also relates to an article comprising a plurality of electroactive particles that form an electrode network wherein the electroactive particles are coated with a system of elec. conductive and low refractive index materials.

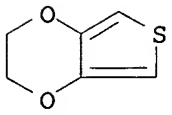
IT **126213-51-2**, Poly(3,4-ethylene dioxythiophene)
(composite electrodes and encapsulated electrode particles for use in solid electrochem. devices)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01M004-64
ICS H01M004-62
INCL 429233000; 429217000; 429232000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): **38**, 56, 72
IT 79-10-7D, Acrylic acid, fluorinated ester 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate 1307-96-6, Cobalt oxide coo, uses 1313-13-9, Manganese oxide mno2, uses 1313-99-1, Nickel oxide nio, uses 1314-62-1, Vanadium oxide, uses 1317-34-6, Manganese oxide mn2o3 1317-35-7, Manganese oxide mn3o4 1344-43-0, Manganese oxide mno, uses 1345-25-1, Iron oxide feo, uses 7439-93-2, Lithium, uses 7439-93-2D, Lithium, intercalation compound 7440-21-3, Silicon, uses 7440-22-4, Silver, uses 7440-31-5, Tin, uses 7440-36-0, Antimony, uses 7440-42-8, Boron, uses 7440-56-4, Germanium, uses 7440-66-6, Zinc, uses 7440-69-9, Bismuth, uses 7782-42-5, Graphite, uses 9002-84-0, Ptfe 9003-07-0, Polypropylene 9003-53-6, Polystyrene 11099-11-9, Vanadium oxide 11126-15-1, Lithium vanadium oxide 12002-78-7 12031-65-1, Lithium nickel oxide linio2 12037-30-8, Vanadium oxide v6o11 12037-42-2D, Vanadium oxide V6O13, lithium-intercalated 12048-27-0, Bili 12057-17-9, Lithium manganese oxide limn2o4 12057-22-6, Lizn 12057-30-6, Antimony, compound with lithium (1:3) 12057-33-9 12063-07-9, Iron lithium oxide fe2lio4 12162-79-7, Lithium manganese oxide limno2 12190-79-3, Cobalt lithium oxide colio2 12253-44-0 12338-02-2 13463-67-7, Titanium oxide, uses 13826-59-0, Lithium manganese **phosphate** limnpo4 15365-14-7, Iron lithium **phosphate** felipo4 18282-10-5, Tin dioxide 18358-13-9D, Methacrylate, fluorinated ester 21651-19-4, Tin monoxide 24937-79-9, Pvdf 25014-41-9, Polyacrylonitrile 25322-68-3, Peo 37217-08-6, Lithium titanium oxide liti2o4 49717-87-5D, 2-Propenoic acid, ion(1-) homopolymer, fluoroalkyl derivative 49717-97-7D, 2-Propenoic acid, 2-methyl-, ion(1-), homopolymer, fluoroalkyl derivative 50926-11-9, Ito 52627-24-4, Cobalt lithium oxide 53262-48-9 55608-41-8 56627-44-2 61812-08-6, Lithium silicide Li21Si8 66403-10-9, Lithium boride (Li5B4) 67070-82-0 71012-86-7, Lithium boride (Li7B6) 74083-26-4 76036-33-4, Lithium silicide Li12Si7 114778-10-8, Iron lithium sulfate fe2li2(so4)3 496816-56-9, Lithium, compound with silver (10:3)
(composite electrodes and encapsulated electrode particles for use in solid electrochem. devices)
IT 79-10-7D, Acrylic acid, esters, fluorinated 79-41-4D, Methacrylic acid, esters, fluorinated 7440-44-0, Carbon, uses 25233-30-1, Polyaniline 25233-34-5, Polythiophene 30604-81-0, Polypyrrole 99742-70-8, Poly(2-methoxyaniline) 104934-51-2, Poly(3-octylthiophene) **126213-51-2**, Poly(3,4-ethylene

dioxythiophene)
(composite electrodes and encapsulated electrode particles for use in solid electrochem. devices)

L41 ANSWER 12 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:78554 HCAPLUS
DOCUMENT NUMBER: 140:154111
TITLE: **Electroluminescent** device and methods for its production and use
INVENTOR(S): Kinlen, Patrick J.
PATENT ASSIGNEE(S): Crosslink Polymer Research, USA
SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Ser. No. 207,576.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004018382	A1	20040129	US 2003-352476	2003 0128
US 2004018379	A1	20040129	US 2002-207576 <--	2002 0729
US 7029763	B2	20060418	<--	
CA 2493153	AA	20040205	CA 2003-2493153	2003 0718
WO 2004011250	A1	20040205	<-- WO 2003-US22473	2003 0718
			<--	

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003256608	A1	20040216	AU 2003-256608	2003 0718
			<--	
EP 1542867	A1	20050622	EP 2003-771654	2003 0718
			<--	

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,

MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2005535077 T2 20051117 JP 2004-524640 2003 0718 <--

PRIORITY APPLN. INFO.: US 2002-207576 A2 2002 0729 <--

US 2003-352476 A 2003 0128

WO 2003-US22473 W 2003 0718

AB A **luminescent** device is described comprises an **electroluminescent** phosphor in operative contact with a **light-emitting** material wherein excitation of the **electroluminescent** phosphor by an a.c. elec. field causes the emission of light by the **light-emitting** material, and wherein the electrodes may comprise an intrinsically conductive polymer. Methods of fabricating the device and using it in an **electroluminescent** display are also described.

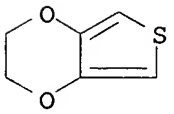
IT **126213-51-2**
(**light-emitting** material; a.c.-powered **electroluminescent** device and fabrication method)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H05B033-14
ICS H05B033-26

INCL 428690000; 428917000; 313503000; 313509000; 427066000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): **38**, 74, 76

ST **electroluminescent** display device ac powered fabrication

IT **Electroluminescent** devices
Semiconductor device fabrication
(a.c.-powered **electroluminescent** device and fabrication method)

IT Polysulfides
Polyvinyl butyrals
(binder polymer; **electroluminecent** phosphor coated

with **light-emitting** material)

IT **Electroluminescent** devices
(displays; a.c.-powered **electroluminescent** device and fabrication method)

IT Polyacetylenes, uses
Polyanilines
Polythiophenylenes
(electrode; a.c.-powered **electroluminescent** device and fabrication method)

IT Phosphors
(**electroluminecent** phosphor coated with **light-emitting** material)

IT **Luminescent** screens
(**electroluminescent**; a.c.-powered **electroluminescent** device and fabrication method)

IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(**light-emitting** material; a.c.-powered **electroluminescent** device and fabrication method)

IT 9011-14-7, PMMA 39399-28-5, PVB
(binder polymer; **electroluminecent** phosphor coated with **light-emitting** material)

IT 25067-58-7, Polyacetylene 25190-62-9, Poly-p-phenylene 25233-34-5, Polythiophene 26499-97-8, Poly-m-phenylene 51555-21-6, Polycarbazole
(electrode; a.c.-powered **electroluminescent** device and fabrication method)

IT 1303-11-3, Indium arsenide (InAs), uses 1306-24-7, Cadmium selenide (CdSe), uses 1314-98-3, Zinc sulfide (ZnS), uses 1315-09-9, Zinc selenide (ZnSe) 12402-02-7, Yttrium oxide sulfide (YOS) 12442-27-2, Cadmium zinc sulfide (CdZnS) 13708-63-9, Terbium fluoride (TbF3) 13778-59-1, Lanthanum **phosphate** (LaPO4) 66199-87-9, Terbium fluoride (TbF)
(**electroluminescent** phosphor; a.c.-powered **electroluminescent** device and fabrication method)

IT 7439-96-5, Manganese, uses 7440-00-8, Neodymium, uses 7440-10-0, Praseodymium, uses 7440-22-4, Silver, uses 7440-27-9, Terbium, uses 7440-50-8, Copper, uses 7440-52-0, Erbium, uses 7440-64-4, Ytterbium, uses
(**electroluminescent** phosphor; a.c.-powered **electroluminescent** device and fabrication method)

IT 81-88-9 91-64-5D, Coumarin, derivs. 92-24-0, Tetracene 92-83-1, Xanthene 120-12-7, Anthracene, uses 148-24-3, 8-Hydroxyquinoline, uses 1239-45-8, Ethidium bromide 2085-33-8, Alq3 2321-07-5, Fluorescein 7439-93-2D, Lithium, salt 9002-85-1 9002-86-2 9002-89-5 9003-39-8 9003-53-6 9003-63-8 13558-31-1 13978-85-3, Bis(8-hydroxyquinolinato)zinc 14128-73-5 14284-95-8 17568-09-1 17904-83-5 17904-86-8 18130-95-5 24936-74-1 24937-16-4, Poly[imino(1-oxo-1,12-dodecanediyl)] 24937-78-8 24937-79-9 24979-70-2 24980-41-4 25013-01-8, Polypyridine 25014-41-9D, derivs. 25038-74-8 25067-59-8 25322-68-3 25535-16-4, Propidium iodide 26009-24-5, Poly-(p-phenylene vinylene) 26098-55-5 30604-81-0 43070-85-5D, Hydroxycoumarin, derivs. 62555-84-4 69031-04-5 75980-76-6, 4,6-Diamidino-2-phenylindole 94928-86-6 110981-38-9 110981-40-3 **126213-51-2** 133019-09-7, Poly(9,9-dihexyl-9H-fluorene-2,7-diyl) 138184-36-8, MEHPPV 142289-08-5 144810-07-1 157474-24-3 166534-30-1 170967-95-0 180179-60-6 184378-14-1 188201-14-1 195456-48-5, Poly(9,9-dioctyl-9H-fluorene-2,7-diyl) 203806-96-6

229970-41-6 254445-51-7 313262-95-2 322727-85-5
338949-42-1 352546-68-0 354558-87-5 452311-41-0
474975-19-4 474975-20-7 474975-21-8 474975-22-9
474975-23-0 474975-24-1 474975-25-2 474975-26-3
475095-73-9 475095-75-1 475095-76-2 475095-77-3
475101-36-1 475102-03-5 475102-07-9 475102-09-1
475102-99-9 577705-40-9, Poly[2-(6-cyano-6-methylheptyloxy)-1,4-phenylene]
(**light-emitting** material; a.c.-powered **electroluminescent** device and fabrication method)

L41 ANSWER 13 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:717485 HCAPLUS
DOCUMENT NUMBER: 139:238675
TITLE: Niobium monoxide powder, niobium monoxide sintered body using the niobium powder and capacitor using the sintered body
INVENTOR(S): Omori, Kazuhiro; Naito, Kazumi; Kawasaki, Toshiya; Wada, Kouichi
PATENT ASSIGNEE(S): Showa Denko K.K., Japan
SOURCE: U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U. S. Ser. No. 144,861.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003170169	A1	20030911	US 2003-382570	2003 0307
			<--	
WO 2002093596	A1	20021121	WO 2002-JP4646	2002 0514
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003213302	A2	20030730	JP 2002-138915	2002 0514
			<--	
CN 1526028	A	20040901	CN 2002-801689	2002 0514
			<--	
US 2003104923	A1	20030605	US 2002-144861	2002

0515
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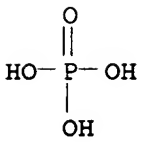
PRIORITY APPLN. INFO.: JP 2001-145571 A
2001
0515
<--
US 2001-291925P P
2001
0521
<--
JP 2001-340318 A
2001
1106
<--
US 2001-331200P P
2001
1109
<--
WO 2002-JP4646 A2
2002
0514
<--
US 2002-144861 A2
2002
0515
<--

AB The present invention relates to a niobium monoxide powder and a sintered body thereof, which can stably produce a capacitor having a large capacitance per unit mass, low equivalent series resistance (ESR), good leakage current characteristics and excellent moisture resistance, and also relates to a capacitor using the same and production methods thereof. The invention discloses (1) A Nb monoxide powder for a capacitor represented by formula NbOx (x = 0.8-1.2) and optionally containing other elements in an amount of 50-200,000 ppm, having a tapping d. of 0.5-2.5 g/mL, an average particle size of 10-1000 μm, angle of repose at 10-60°, the BET sp. surface area from 0.5-40 m2/g, and a plurality of pore diameter peak tops in the pore distribution, and a producing method thereof; (2) a Nb monoxide sintered body, which is obtained by sintering the above Nb monoxide powder and, having a plurality of pore diameter peak tops in a range of 0.01 μm to 500 μm, preferably, the peak tops of 2 peaks among the plurality of pore diameter peak tops having a highest relative intensity are present at 0.2-0.7 μm and at 0.7-3 μm, resp., and a producing method thereof; (3) a capacitor using the above sintered body and a producing method thereof; and (4) an electronic circuit and **electronic device** using the above capacitor.

IT **7664-38-2D, Phosphoric acid**, salts
(activator; niobium monoxide powder, niobium monoxide sintered body using the niobium powder and capacitor using the sintered body)

RN 7664-38-2 HCAPLUS

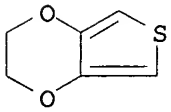
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(niobium monoxide powder, niobium monoxide sintered body using the niobium powder and capacitor using the sintered body)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM C01G033-00
ICS C04B035-495
INCL 423592100; 501134000
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 57
IT Capacitor electrodes
Capacitors
Carbonization
Doping
Electronic device fabrication
Nitriding
Sintering
(niobium monoxide powder, niobium monoxide sintered body using the niobium powder and capacitor using the sintered body)
IT 64-19-7D, Acetic acid, salts 76-22-2, Camphor 80-62-6D, 2-Propenoic acid, 2-methyl-, methyl ester, polymers 91-20-3, Naphthalene, uses 106-51-4, Quinone, uses 120-12-7, Anthracene, uses 144-62-7D, Oxalic acid, salts 463-79-6D, Carbonic acid, salts 471-34-1, Calcium carbonate, uses 1303-86-2, Boron oxide (B2O3), uses 1304-28-5, Barium oxide, uses 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 1314-36-9, Yttria, uses 1314-68-7, Rhenium oxide (Re2O7) 1344-28-1, Alumina, uses **7664-38-2D, Phosphoric acid**, salts 7664-93-9D, Sulfuric acid, salts 7697-37-2D, Nitric acid, salts 7782-77-6D, Nitrous acid, salts 7782-99-2D, Sulfurous acid, salts 9002-89-5, Polyvinyl alcohol 9003-01-4, Polyacrylic acid 9003-01-4D, Polyacrylic acid, esters 9003-05-8, Polyacrylamide 10043-35-3D, Boric acid, salts 10377-66-9, Manganese nitrate (Mn(NO3)2) 12036-22-5, Tungsten oxide (WO2) 12125-02-9, Ammonium chloride, uses 18282-10-5, Tin oxide (SnO2) 20033-08-3, Manganese oxide (MnO3) 25014-12-4, Polymethacrylamide 25087-26-7, Polymethacrylic acid
(activator; niobium monoxide powder, niobium monoxide sintered

body using the niobium powder and capacitor using the sintered body)

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(niobium monoxide powder, niobium monoxide sintered body using the niobium powder and capacitor using the sintered body)

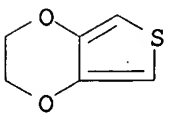
L41 ANSWER 14 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:715976 HCAPLUS
DOCUMENT NUMBER: 139:222696
TITLE: Solid electrolytic capacitors using conductive polymers
INVENTOR(S): Abe, Katsumi; Fukui, Norihito; Nogami, Katsunori
PATENT ASSIGNEE(S): Nippon Chemi-Con Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003257795	A2	20030912	JP 2002-3961 <--	20020110
PRIORITY APPLN. INFO.:			JP 2001-403121 A <--	20011227

AB The title capacitors having a conductive polymer bound between an anode and a cathode have an anode film provided with a withstand voltage less than a level which is set higher than its rating voltage, so as to give the withstand overvoltage satisfied with the overvoltage characteristics. Also, the desired overvoltage characteristics are obtained by making the conductive polymer withstand voltage higher than the anode film withstand voltage. The conductive polymer may preferably be dielec. 3,4-ethylenedioxythiophene.

IT **126213-50-1**, 3,4-Ethylenedioxythiophene
(capacitance dielec. polymer; solid electrolytic capacitors using conductive polymers for improved static capacitance and ESR)

RN 126213-50-1 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro- (9CI) (CA INDEX NAME)



IC ICM H01G009-04
ICS H01G009-028
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 38
IT **126213-50-1**, 3,4-Ethylenedioxythiophene

(capacitance dielec. polymer; solid electrolytic capacitors using conductive polymers for improved static capacitance and ESR)

IT 7722-76-1, Ammonium **phosphate** (NH4H2PO4)
(capacitor amending solution; solid electrolytic capacitors using conductive polymers for improved static capacitance and ESR)

L41 ANSWER 15 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:633136 HCAPLUS
DOCUMENT NUMBER: 139:152388
TITLE: Nonaqueous electrolyte compositions for lithium secondary batteries
INVENTOR(S): Song, Eui-hwan; Jung, Won-il; Hwang, Duck-chul
PATENT ASSIGNEE(S): S. Korea
SOURCE: U.S. Pat. Appl. Publ., 5 pp., Cont.-in-part of U.S. Ser. No. 565,158, abandoned.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003152840	A1	20030814	US 2002-278354 <--	2002 1022
PRIORITY APPLN. INFO.:			US 2000-565158 B2 <--	2000 0503

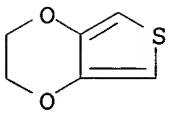
AB Disclosed are nonaq. electrolyte compns. of the present invention that comprise nonaq. solvents and monomers such as aniline, phenanthrene, ethylenedioxythiophene, benzothiophene or derivs. thereof. The monomers are contained in the electrolytes of the present invention in the amts. of less than about 5.0 weight% of the nonaq. solvent. In the present invention, cyclic carbonates, linear carbonates or mixts. thereof can be used as the nonaq. solvents. The electrolyte compns. of the present invention improve the safety characteristics of the cell by preventing the flow of large currents resulting from overcharge or feed-through, and also improve cell life characteristic by helping the reversible transfer of lithium ions.

IT **126213-51-2**, Poly(Ethylenedioxythiophene)
(nonaq. electrolyte compns. for lithium secondary batteries)

RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01M010-40
ICS H01M004-60; H01M004-58
INCL 429338000; 429342000; 429213000; 429231400
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): **38**
IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 623-53-0, Ethyl methyl carbonate 7791-03-9, Lithium perchlorate 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium **hexafluorophosphate** 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 210353-06-3, Cobalt lithium nickel strontium oxide
(nonaq. electrolyte compns. for lithium secondary batteries)
IT 85-01-8, Phenanthrene, uses 95-15-8, Benzothiophene **126213-51-2**, Poly(Ethylenedioxythiophene)
(nonaq. electrolyte compns. for lithium secondary batteries)

L41 ANSWER 16 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:529525 HCAPLUS
DOCUMENT NUMBER: 139:109959
TITLE: Solid electrolytic capacitors and manufacture of capacitors thereof
INVENTOR(S): Yoshizawa, Atsushi
PATENT ASSIGNEE(S): Nippon Chemi-Con Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003197478	A2	20030711	JP 2001-399075 <--	2001 1228

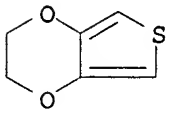
PRIORITY APPLN. INFO.: JP 2001-399075 <-- 2001 1228

AB The title manufacturing involves (1) reforming an anode film, (2) laminating the anode film directly with a cathode film and rolling to give a capacitor component, (3) reforming the component, (4) immersing the reformed component into a viscosity-adjusted monomer solution containing an oxidant to give the monomer polymerized inside the component for impregnation of a conductive polymer solid electrolyte layer inside the component, (5) inserting the component into a case, (6) press-sealing the opening with a rubber plug, and (7) aging. The conductive electrolyte polymer may be poly-3,4-ethylenedioxythiophene. The manufacturing process gives the capacitors compact size and increased capacitance without use of a separator.

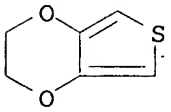
IT **126213-51-2P**, Poly-3,4-ethylenedioxythiophene
(solid electrolytic capacitors and manufacture of capacitors impregnation of solid electrolyte by in-situ polymerization without use of separators)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IT **126213-50-1**, 3,4-Ethylenedioxythiophene
(solution, oxidative polymerization of; solid electrolytic capacitors and manufacture of capacitors impregnation of solid electrolyte by in-situ polymerization without use of separators)
RN 126213-50-1 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro- (9CI) (CA INDEX NAME)



IC ICM H01G009-028
ICS H01G009-04; H01G009-048
CC 76-10 (Electric Phenomena)
Section cross-reference(s): **38**, 72
IT 7722-76-1, Ammonium **phosphate** ($NH_4H_2PO_4$)
(reforming agent; solid electrolytic capacitors and manufacture of capacitors impregnation of solid electrolyte by in-situ polymerization without use of separators)
IT **126213-51-2P**, Poly-3,4-ethylenedioxythiophene
(solid electrolytic capacitors and manufacture of capacitors impregnation of solid electrolyte by in-situ polymerization without use of separators)
IT **126213-50-1**, 3,4-Ethylenedioxythiophene
(solution, oxidative polymerization of; solid electrolytic capacitors and manufacture of capacitors impregnation of solid electrolyte by in-situ polymerization without use of separators)

L41 ANSWER 17 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:511641 HCAPLUS
DOCUMENT NUMBER: 139:77169
TITLE: Design of a screen printable electrode for an organic **light-emitting** device
INVENTOR(S): Carter, Sue A.; Victor, John
PATENT ASSIGNEE(S): Add-Vision, Inc., USA
SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003054981	A1	20030703	WO 2002-US41353	2002 1220
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002361859	A1	20030709	AU 2002-361859	2002 1220
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US 2003153141	A1	20030814	US 2002-327632	2002 1220
			<--	
EP 1456893	A1	20040915	EP 2002-797487	2002 1220
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005514729	T2	20050519	JP 2003-555599	2002 1220
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PRIORITY APPLN. INFO.:			US 2001-342579P P	2001 1220
			<--	
			WO 2002-US41353 W	2002 1220
			<--	

AB The invention relates to the design of a screen printable electrode for an organic **light emitting** device. An **electroluminescent** device consists of a plurality of layers, where the plurality of layers includes (i) a bottom electrode layer; (ii) a **light-emitting** material layer, such that the **light-emitting** material layer is created over the bottom electrode layer; and (iii) a top electrode layer, such that the top electrode layer is

printed under atmospheric conditions over the **light-emitting** material layer.

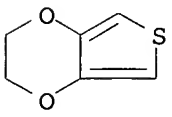
IT **332951-15-2**, 3,4-Ethylenedioxythiophene-styrenesulfonic acid copolymer
(conductive paste containing; design of a screen printable electrode for an organic **light-emitting** device)

RN 332951-15-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, polymer with ethenylbenzene monosulfo deriv. (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



CM 2

CRN 30105-09-0
CMF C8 H8 O3 S
CCI IDS

$H_2C{=}CH{-}Ph$

D1—SO_3H

IC ICM H01L051-20
ICS H01L051-40

CC 76-2 (Electric Phenomena)
Section cross-reference(s): **38**, 66, 73, 74

ST screen printable electrode org **light emitting** device

IT Metals, uses
(composite, conductive paste containing; design of a screen printable electrode for an organic **light-emitting** device)

IT Conducting polymers
(conductive paste containing; design of a screen printable electrode for an organic **light-emitting** device)

IT Bromides, uses
Chlorides, uses
Fluorides, uses
Halides
Iodides, uses
Oxides (inorganic), uses
Polyanilines
Polymers, uses

Salts, uses
Sulfates, uses
(conductive paste containing; design of a screen printable electrode for an organic **light-emitting** device)

IT Polymers, uses
(conjugated, **electroluminescent** material; design of a screen printable electrode for an organic **light-emitting** device)

IT Electric contacts
Electrically conductive pastes
Electroluminescent devices
Ink-jet printing
Printing (impact)
Printing (nonimpact)
Screen printing
(design of a screen printable electrode for an organic **light-emitting** device)

IT Films
(elec. conductive; design of a screen printable electrode for an organic **light-emitting** device)

IT Sol-gel processing
(electrode layer containing; design of a screen printable electrode for an organic **light-emitting** device)

IT **Luminescent** substances
(**electroluminescent**, films; design of a screen printable electrode for an organic **light-emitting** device)

IT Electric conductors
(films; design of a screen printable electrode for an organic **light-emitting** device)

IT Surfactants
(ionic, electrode layer containing; design of a screen printable electrode for an organic **light-emitting** device)

IT Esters, uses
(solvent; design of a screen printable electrode for an organic **light-emitting** device)

IT 51-92-3D, Tetramethylammonium, salts 62-53-3D, Phenylamine, salts 66-40-0D, Tetraethylammonium, salts 76-05-1D, Trifluoroacetic acid, salts 104-15-4D, Toluenesulfonic acid, salts 603-34-9, Triphenylamine 1493-13-6D, Trifluoromethylsulfonic acid, salts 7429-90-5D, Aluminum, salts 7439-93-2D, Lithium, salts 7440-02-0, Nickel, uses 7440-09-7D, Potassium, salts 7440-22-4, Silver, uses 7440-23-5D, Sodium, salts 7440-39-3D, Barium, salts 7440-44-0, Carbon, uses 7440-46-2D, Cesium, salts 7440-70-2D, Calcium, salts 10549-76-5D, Tetrabutylammonium, salts 13010-31-6D, Tetrapropylammonium, salts 15477-33-5, Aluminum chlorate 16872-11-0D, Tetrafluoroboric acid, salts 16940-81-1D, **Hexafluorophosphoric acid**, salts 25233-30-1, Polyaniline 33906-65-9D, Borate(1-), tetraphenyl-, hydrogen, salts **332951-15-2**, 3,4-Ethylenedioxythiophene-styrenesulfonic acid copolymer
(conductive paste containing; design of a screen printable electrode for an organic **light-emitting** device)

IT 1332-29-2, Tin oxide
(electrode layer containing; design of a screen printable electrode for an organic **light-emitting** device)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 18 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:491535 HCAPLUS
DOCUMENT NUMBER: 139:61319
TITLE: Organic NTC thermistor materials and devices and manufacturing thereof
INVENTOR(S): Kawaguchi, Toshiyuki; Takahashi, Masayuki
PATENT ASSIGNEE(S): Shin-Etsu Polymer Co., Ltd., Japan
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

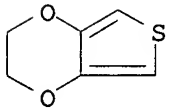
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003052777	A1	20030626	WO 2002-JP13089	2002 1213
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002354492	A1	20030630	AU 2002-354492	2002 1213
			<--	
US 2005106409	A1	20050519	US 2003-498844	2002 1213
			<--	
PRIORITY APPLN. INFO.:			JP 2001-381849 A	2001 1214
			<--	
			WO 2002-JP13089 W	2002 1213
			<--	

AB An organic NTC material is obtained by mixing 1 weight-part conjugated organic semiconductor polymer with either ≥2 weight-parts thermoplastic or thermosetting resin. The conjugated organic semiconductor polymer is preferably selected from solvent-soluble polyaniline, polythiophene, polypyrrole, and their derivs. Therefore, an organic NTC device is obtainable at low temperature without expensive composite rare earth/transition oxides.

IT **126213-51-2**, Polyethylenedioxythiophene
(conjugated semiconductor material; organic NTC thermistor semiconductor materials and devices and manufacturing thereof)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01C007-04
ICS C08G061-12; C08L065-00; C08L101-00
CC 76-3 (Electric Phenomena)
Section cross-reference(s): **38**
IT 100424-56-4, Poly(methyl 3-methyl-4-pyrrole carboxylate) 110864-38-5, Poly(3-phenylaniline) **126213-51-2**, Polyethylenedioxythiophene 129933-82-0, Poly(butyl 3-methyl-4-pyrrole carboxylate)
(conjugated semiconductor material; organic NTC thermistor semiconductor materials and devices and manufacturing thereof)
IT 104-15-4, p-Toluenesulfonic acid, uses 115-86-6, **Triphenylphosphate** 64535-52-0
(organic NTC thermistor semiconductor materials and devices and manufacturing thereof)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 19 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:472925 HCAPLUS
DOCUMENT NUMBER: 139:60172
TITLE: **Light-emitting** device with organic **electroluminescent** material, and photoluminescent materials
INVENTOR(S): McNulty, Thomas Francis; Duggal, Anil Raj; Turner, Larry Gene; Shiang, Joseph John
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 19 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003111955	A1	20030619	US 2001-683345	2001 1217

<--

US 6903505 B2 20050607
PRIORITY APPLN. INFO.: US 2001-683345
2001
1217

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AB **Light-emitting** devices are described which comprise a **light-emitting** member that comprises a first electrode, a second electrode, and ≥1 organic **electroluminescent** (EL) material disposed between the first and second electrodes, the **light-emitting** member being disposed on a substrate and emitting first electromagnetic (EM) radiation having a first spectrum when an elec. voltage is applied across the electrodes; and ≥1 organic photoluminescent (PL) material disposed in a path of **light emitted** by the **light-emitting** member, the organic PL material absorbing a portion of the first EM radiation and emitting second EM radiation having a second spectrum. Methods of making **light-emitting** devices based on ≥1 organic EL material are discussed which entail providing a substrate; forming a **light-emitting** member in a process comprising the steps of (a) depositing a first elec. conducting material on 1 surface of the substrate to form a first electrode; (b) depositing the ≥1 organic EL material on the first electrode; and (c) depositing a second elec. conducting material on the organic EL material to form a second electrode; and disposing ≥1 organic PL material adjacent to the **light-emitting** member.

IT **155090-83-8**, Baytron P
(**light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

RN 155090-83-8 HCAPLUS

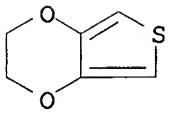
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-51-2
CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S



CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x

CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS

D1— CH═ CH_2

D1— SO_3H

IC ICM H05B033-12
ICS H05B033-14
INCL 313504000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 76
ST org **light emitting** device fabrication **electroluminescent** photoluminescent OLED display
IT Vapor deposition process
(chemical; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials and methods for fabricating devices using)
IT Silicone rubber, uses
(di-Me, phosphor dispersed in; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT Coating process
(dip; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials and methods for fabricating devices using)
IT **Electroluminescent** devices
(displays; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials and methods for fabricating devices)
IT Polysilanes
(**electroluminescent** material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT **Luminescent** substances
(**electroluminescent**, organic; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT **Luminescent** screens
(**electroluminescent**; **light-emitting** devices employing both organic **electroluminescent**

material and photoluminescent materials and methods for fabricating devices)

IT Polysiloxanes, uses
(encapsulant; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT Azo dyes
Cyanine dyes
Electroluminescent devices
Luminescent substances
(**light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT Semiconductor device fabrication
(**light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials and methods for fabricating devices)

IT Casting process
Crosslinking
Dispersion (of materials)
Ink-jet printing
Spraying
Sputtering
(**light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials and methods for fabricating devices using)

IT Optical materials
(light-scattering; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT Polymers, uses
(**luminescent** material dispersed in; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT Epoxides
(normal or silicone-functionalized encapsulant; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT Vapor deposition process
(phys.; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials and methods for fabricating devices using)

IT Coating process
(spin; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials and methods for fabricating devices using)

IT Dyes
(xanthene, coumarin, oxobenzanthracene; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 1314-36-9, Yttrium oxide (Y2O3), uses
(bismuth-, europium-codoped **luminescent** material, scattering material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 7429-90-5, Aluminum, uses 7681-49-4, Sodium fluoride NaF, uses
(cathode layer; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 12027-88-2, Yttrium silicate (Y2SiO5) 13709-90-5, Gadolinium borate (GdBO3)
(cerium-, terbium-codoped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 12005-19-5, Aluminum terbium oxide (Al5Tb3O12) 12253-68-8, Aluminum lutetium oxide (Al5Lu3O12)
(cerium-doped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 7439-96-5, Manganese, uses 7440-27-9, Terbium, uses 7440-69-9, Bismuth, uses
(doped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 9011-14-7, PMMA
(dye-doped; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 1312-43-2, Indium oxide 1314-13-2, Zinc oxide, uses 1332-29-2, Tin oxide 117944-65-7, Indium zinc oxide
(electrode layer; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 7440-53-1, Europium, uses
(electrode, doped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 7440-45-1, Cerium, uses
(electrode, photoluminescent material doped with; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 7429-90-5D, Aluminum, alloys 7439-91-0, Lanthanum, uses 7439-91-0D, Lanthanum, alloys 7439-93-2, Lithium, uses 7439-93-2D, Lithium, alloys 7439-95-4, Magnesium, uses 7439-95-4D, Magnesium, alloys 7440-09-7, Potassium, uses 7440-09-7D, Potassium, alloys 7440-19-9, Samarium, uses 7440-19-9D, Samarium, alloys 7440-22-4, Silver, uses 7440-22-4D, Silver, alloys 7440-23-5, Sodium, uses 7440-23-5D, Sodium, alloys 7440-24-6, Strontium, uses 7440-24-6D, Strontium, alloys 7440-31-5, Tin, uses 7440-31-5D, Tin, alloys 7440-39-3, Barium, uses 7440-39-3D, Barium, alloys 7440-45-1D, Cerium, alloys 7440-53-1D, Europium, alloys 7440-66-6, Zinc, uses 7440-66-6D, Zinc, alloys 7440-67-7, Zirconium, uses 7440-67-7D, Zirconium, alloys 7440-70-2, Calcium, uses 7440-70-2D, Calcium, alloys 7440-74-6, Indium, uses 7440-74-6D, Indium, alloys
(electrode; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 74-85-1D, Ethene, tetraaryl 91-64-5, Coumarin 120-12-7,

Anthracene, uses 191-07-1, Coronene 198-55-0, Perylene 517-51-1, Rubrene 13963-57-0, Aluminum acetyl acetonate 14405-43-7, Gallium, tris(2,4-pentanedionato-κO,κO')-, (OC-6-11)- 14405-45-9, Indium acetylacetonate 25067-59-8, Poly (n-vinylcarbazole) 25067-59-8D, Poly (n-vinylcarbazole), derivs. 25190-62-9, Poly(1,4-phenylene) 25190-62-9D, Poly(1,4-phenylene), derivs. 27236-84-6, Tetraphenylbutadiene 28802-91-7, Phenylanthracene 95270-88-5D, Poly(fluorene), alkyl derivs. 153521-90-5, 1,3,5-Tris[n-(4-diphenylaminophenyl)phenylamino] benzene 181172-82-7 181172-88-3
(**electroluminescent** material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 13812-81-2, Strontium **pyrophosphate** (Sr2P2O7) 20644-06-8, Magnesium strontium **pyrophosphate** (MgSrP2O7) 99533-22-9, Calcium magnesium chloride silicate (Ca8MgCl2(SiO4)4) 545390-30-5
(europium-, manganese-doped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 55134-50-4, Aluminum barium magnesium oxide (Al16BaMg2O27)
(europium-doped or europium, manganese-codoped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 272792-87-7 494201-99-9, Gadolinium vanadium yttrium borate (Gd0-1V0-1Y0-1B0-1O4) 533920-59-1, Strontium chloride **phosphate** (Sr5Cl2(PO4)10)
(europium-doped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 81-33-4 33941-07-0D, Pyran, derivs. 50926-11-9, Indium tin oxide 60475-00-5D, Thiopyran, derivs. 73467-76-2D, Benzopyrene, derivs. **155090-83-8**, Baytron P
(**light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 82953-57-9, LUMOGEN F ORANGE 240 123174-58-3, LUMOGEN F RED 300
(**light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 545390-29-2, Aluminum cerium gadolinium yttrium oxide (Al5Ce0.09Gd0.57Y2.34O12)
(**light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)

IT 1309-48-4, Magnesium oxide, uses 1314-23-4, Zirconium oxide (ZrO2), uses 1317-82-4, Sapphire (Al2O3) 7727-43-7, Barium sulfate 7782-40-3, Diamond, uses 10101-52-7, Zirconium silicate (ZrSiO4) 12005-21-9, Aluminum yttrium oxide (Al5Y3O12) 12024-36-1, Gadolinium gallium garnet (Gd3Ga5O12) 12055-23-1, Hafnium oxide (HfO2) 13397-26-7, Calcite (CaCO3), uses 13463-67-7, Titanium oxide (TiO2), uses 157858-56-5, Germanium oxide
(light-scattering material; **light-emitting** devices employing both organic **electroluminescent**

material and photoluminescent materials)
IT 12159-91-0, Germanium magnesium fluoride oxide (GeMg4FO5.5)
(manganese-doped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 132615-42-0, Aluminum cerium yttrium oxide (Al5(Ce,Y)3O12) 352033-92-2 352033-93-3 494201-96-6, Aluminum cerium gadolinium yttrium oxide (Al5(Ce,Gd,Y)3O12) 494201-97-7, Aluminum cerium gallium yttrium oxide ((Al,Ga)5(Ce,Y)3O12)
(photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
IT 55070-88-7, Aluminum cerium magnesium oxide (Al11CeMgO19)
(terbium-doped photoluminescent material; **light-emitting** devices employing both organic **electroluminescent** material and photoluminescent materials)
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 20 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:356129 HCAPLUS
DOCUMENT NUMBER: 138:360216
TITLE: A thin layer inorganic **light emitting** device with undoped zinc sulfide nanoparticles
INVENTOR(S): Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1309013	A1	20030507	EP 2001-579 <--	2001 1030
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003107313	A1	20030612	US 2002-264201 <--	2002 1003
US 6724141	B2	20040420		
JP 2003187981	A2	20030704	JP 2002-308257 <--	2002 1023
PRIORITY APPLN. INFO.:			EP 2001-579 A <--	2001 1030
			US 2001-333225P P	

2001
1121

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AB Thin-layer inorg. **light-emitting** devices are described which comprise, in order, a transparent or semitransparent substrate, a first electrode, a coated layer comprising zinc sulfide nanoparticles, a second electrode, with the proviso that ≥1 of the first and second electrodes is semitransparent, characterized in, that the zinc sulfide nanoparticles substantially contain no metal impurities, and the device is capable of **emitting light** in response to a d.c. caused by applying a voltage between the electrodes, with an emission maximum of **electroluminescence** at a wavelength > 450 nm.

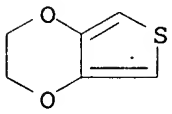
IT **126213-51-2**, Poly (3,4-ethylenedioxythiophene)
(conductive electrode complex containing; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction in presence of)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IT **155090-83-8**, BAYTRON P
(hole-injection layer; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles)

RN 155090-83-8 HCAPLUS

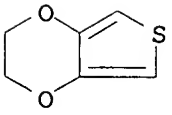
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-51-2
CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S



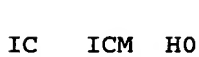
CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS

D1— CH═ CH_2



D1— SO_3H

IC ICM H01L033-00
ICS H01S005-327; H01S005-347; H05B033-12; H05B033-14; H05B033-18; H05B033-20
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76, 78
ST thin film **electroluminescent** device undoped zinc sulfide nanoparticle
IT Precipitation (chemical)
(double-jet; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by)
IT **Polyphosphates**
(stabilizing compound; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction in presence of)
IT **Polyphosphoric acids**
(stabilizing compound; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction using)
IT Nanoparticles
(thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles)
IT **Electroluminescent** devices
(thin-film; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles)
IT 50926-11-9, Indium tin oxide
(anode; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles)
IT 7429-90-5, Aluminum, uses
(cathode; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles)
IT 50851-57-5 **126213-51-2**, Poly (3,4-

ethylenedioxythiophene)
(conductive electrode complex containing; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction in presence of)
IT **155090-83-8**, BAYTRON P
(hole-injection layer; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles)
IT 96-27-5, Thioglycerol 13478-98-3, **Hexametaphosphate**
(stabilizing compound; thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction in presence of)
IT 1314-98-3P, Zinc sulfide, properties
(thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles)
IT 1393-03-9 9003-39-8, LUVISKOL K-90
(thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles coated using dispersion containing)
IT 288-32-4D, Imidazole, derivs. 288-88-0D, 1H-1,2,4-Triazole, derivs. 125373-19-5
(thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction in presence of)
IT 7647-14-5, Sodium chloride, uses 7664-41-7, Ammonia, uses
(thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction using)
IT 557-34-6, Zinc acetate 1313-82-2, Sodium sulfide Na2S, reactions
(thin layer inorg. **light emitting** device with undoped zinc sulfide nanoparticles prepared by precipitation reaction using)
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 21 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:317805 HCAPLUS
DOCUMENT NUMBER: 138:330250
TITLE: Anode films, manufacture of anode films, and solid electrolyte capacitors using anode films thereof
INVENTOR(S): Monden, Ryuji; Konuma, Hiroshi; Kobayashi, Masaki; Hashimoto, Akira
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003124068	A2	20030425	JP 2001-312171	2001 1010

<--
PRIORITY APPLN. INFO.: JP 2001-312171

2001
1010

<--

OTHER SOURCE(S): MARPAT 138:330250

AB The title manufacturing involves (1) supporting valve metal films by their one edge on a metal support, (2) electrolytic etching the valve metal films by immersing the supported films into an electrolytic solution, (3) primary reforming the etched films in an electrolyte composition solution containing oxalic acid, adipic acid, boric **acid**, **phosphoric acid**, silicic acid, and/or their salts, and (4) secondary reforming the films with an electrolyte solution having a different electrolytic composition solution The etched and reformed metal films as anode films provide reliable connection of the films in the capacitors.

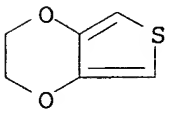
IT **126213-51-2**, Poly-3,4-ethylenedioxythiophene
(elec. conductor; anode films and manufacture of anode films and solid electrolyte capacitors using anode films thereof)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

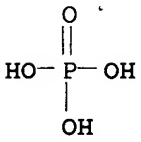
CRN 126213-50-1
CMF C6 H6 O2 S



IT **7664-38-2**, **Phosphoric acid**, reactions
(reforming solution; anode films and manufacture of anode films and solid electrolyte capacitors using anode films thereof)

RN 7664-38-2 HCAPLUS

CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM H01G009-04
ICS H01G009-00; H01G009-028; H01G009-048

CC 76-10 (Electric Phenomena)
Section cross-reference(s): **38**, 56

IT 117116-78-6, Poly-1,3-dihydroisothianaphthene **126213-51-2**, Poly-3,4-ethylenedioxythiophene
(elec. conductor; anode films and manufacture of anode films and solid electrolyte capacitors using anode films thereof)

IT 124-04-9, Adipic acid, reactions 144-62-7, Oxalic acid, reactions 1113-38-8, Ammonium oxalate 1312-76-1, Potassium silicate 1343-98-2, Silicic acid **7664-38-2**, **Phosphoric acid**, reactions 10043-35-3, Boric acid, reactions

(reforming solution; anode films and manufacture of anode films and solid electrolyte capacitors using anode films thereof)

L41 ANSWER 22 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:298694 HCAPLUS
DOCUMENT NUMBER: 138:328748
TITLE: Electrophosphorescent elements with conductive polymers
INVENTOR(S): Heuer, Helmut-Werner; Wehrmann, Rolf
PATENT ASSIGNEE(S): Bayer AG, Germany
SOURCE: Ger. Offen., 14 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10150477	A1	20030417	DE 2001-10150477	2001 1016
			<--	
US 2003108769	A1	20030612	US 2002-251597	2002 0920
			<--	
US 6869697	B2	20050322		
WO 2003034512	A1	20030424	WO 2002-EP11130	2002 1004
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1438756	A1	20040721	EP 2002-774685	2002 1004
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1572031	A	20050126	CN 2002-820530	2002 1004
			<--	
JP 2005506665	T2	20050303	JP 2003-537134	2002 1004
			<--	

PRIORITY APPLN. INFO.: DE 2001-10150477 A 2001 1016
<--
WO 2002-EP11130 W 2002 1004
<--

OTHER SOURCE(S): MARPAT 138:328748

AB **Layered structures** comprising a transparent substrate provided with an elec. conductive layer, an electrooptical active layer, and ≥1 addnl. substrate provided with an elec. conductive layer are described in which ≥1 of the ≥2 substrates has a coating formed from a conductive polymer system and the electrooptical active layer contains an electrophosphorescent compound **Electroluminescent** devices employing the structures are also described.

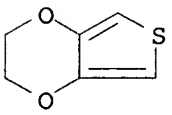
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene) (polystyrene sulfonate-doped; electrophosphorescent elements with conductive polymers)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM C09K011-00
ICS H01L033-00; G09F009-30

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76

IT **Electroluminescent** devices
(electrophosphorescent elements with conductive polymers)

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene) (polystyrene sulfonate-doped; electrophosphorescent elements with conductive polymers)

L41 ANSWER 23 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:172150 HCAPLUS
DOCUMENT NUMBER: 138:213866
TITLE: Fabrication of tantalum solid electrolytic capacitors with doped poly-3,4-ethylenedioxythiophene electrolyte
INVENTOR(S): Sasaki, Yoshihiko; Harashima, Yutaka; Endo, Kazuyoshi
PATENT ASSIGNEE(S): Nippon Chemi-Con Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003068572	A2	20030307	JP 2001-255116	2001 0824

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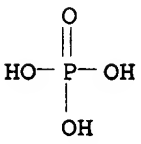
PRIORITY APPLN. INFO.: JP 2001-255116 2001 0824

<--

AB The title fabrication involves (1) oxidative polymerizing 3,4-ethylenedioxythiophene to give a poly-3,4-ethylenedioxythiophene electrolyte, (2) removing SO42- dopant out of the polymer electrolyte, and (3) anion doping the polymer electrolyte with phosphoric ion, alkylsulfonic ion, or aromatic alkylsulfonic ion. The dopant removal and the doping give conductive polymer layer increased conductivity without conductive deterioration in equivalent-series resistance.

IT **7664-38-2**, **Phosphoric acid**, uses
(dopant; fabrication of tantalum solid electrolytic capacitors with undoped and doped poly-3,4-ethylenedioxythiophene electrolyte)

RN 7664-38-2 HCAPLUS
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)

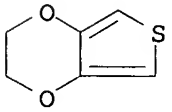


IT **126213-51-2**, Poly-3,4-ethylenedioxythiophene
(electrolyte, undoping and doping in; fabrication of tantalum solid electrolytic capacitors with undoped and doped poly-3,4-ethylenedioxythiophene electrolyte)

RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

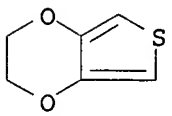
CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IT **126213-50-1**, 3,4-Ethylenedioxythiophene
(oxidative polymerization; fabrication of tantalum solid electrolytic

capacitors with undoped and doped poly-3,4-ethylenedioxythiophene electrolyte)
RN 126213-50-1 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro- (9CI) (CA INDEX NAME)



IC ICM H01G009-00
ICS H01G009-028
CC 76-10 (Electric Phenomena)
Section cross-reference(s): **38**, 56, 72
IT **7664-38-2**, **Phosphoric acid**, uses
(dopant; fabrication of tantalum solid electrolytic capacitors with undoped and doped poly-3,4-ethylenedioxythiophene electrolyte)
IT **126213-51-2**, Poly-3,4-ethylenedioxythiophene
(electrolyte, undoping and doping in; fabrication of tantalum solid electrolytic capacitors with undoped and doped poly-3,4-ethylenedioxythiophene electrolyte)
IT **126213-50-1**, 3,4-Ethylenedioxythiophene
(oxidative polymerization; fabrication of tantalum solid electrolytic capacitors with undoped and doped poly-3,4-ethylenedioxythiophene electrolyte)

L41 ANSWER 24 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:118181 HCAPLUS
DOCUMENT NUMBER: 138:156304
TITLE: Battery structures, self-organizing structures, and related methods
INVENTOR(S): Chiang, Yet-Ming; Moorehead, William Douglas; Holman, Richard K.; Viola, Michael S.; Gozdz, Antoni S.; Loxley, Andrew; Riley, Gilbert N., Jr.
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA; A123 Systems
SOURCE: PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003012908	A2	20030213	WO 2002-US23880	20020726
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WO 2003012908	C1	20040219		
WO 2003012908	C2	20040325		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,

MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE,
SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN,
YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,
SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

US 2003082446	A1	20030501	US 2001-21740	2001 1022 <--
CA 2455819	AA	20030213	CA 2002-2455819	2002 0726 <--
EP 1433217	A2	20040630	EP 2002-768358	2002 0726 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005525674	T2	20050825	JP 2003-517975	2002 0726 <--

PRIORITY APPLN. INFO.:	US 2001-308360P	P 2001 0727 <--
	US 2001-21740	A 2001 1022 <--
	US 2000-242124P	P 2000 1020 <--
	WO 2002-US23880	W 2002 0726 <--

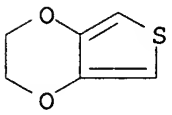
AB An energy storage device includes a first electrode comprising a first material and a second electrode comprising a second material, at least a portion of the first and second materials forming an interpenetrating network when dispersed in an electrolyte, the electrolyte, the first material and the second material are selected so that the first and second materials exert a repelling force on each other when combined. An electrochem. device, includes a first electrode in elec. communication with a first current collector; a second electrode in elec. communication with a second current collector; and an ionically conductive medium in ionic contact with the first and second electrodes, wherein at least a portion of the first and second electrodes form an interpenetrating network and wherein at least one of the first and second electrodes comprises an electrode structure providing two or more pathways to its current collector.

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(battery structures, self-organizing structures, and related

methods)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01M010-04
ICS H01M010-40; H01M004-04; H01M004-02; H01B009-00; G02F001-00
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): **38**, 72
IT 68-12-2, n,n-Dimethylformamide, uses 75-11-6, Diiodomethane 96-49-1, Ethylene carbonate 105-58-8, DiEthyl carbonate 108-32-7, Propylene carbonate 616-38-6, DimEthyl carbonate 627-31-6, 1,3-Diiodopropane 1307-96-6, Cobalt oxide coo, uses 1313-13-9, Manganese oxide mno2, uses 1313-99-1, Nickel oxide nio, uses 1314-23-4, Zirconium oxide, uses 1314-62-1, Vanadia, uses 1317-34-6, Manganese oxide mn2o3 1317-35-7, Manganese oxide mn3o4 1335-25-7, Lead oxide 1344-43-0, Manganese oxidemno, uses 1345-25-1, Iron oxide feo, uses 7226-23-5 7439-93-2, Lithium, uses 7439-93-2D, Lithium, intercalation compound 7440-21-3, Silicon, uses 7440-22-4, Silver, uses 7440-31-5, Tin, uses 7440-36-0, Antimony, uses 7440-42-8, Boron, uses 7440-44-0, Carbon, uses 7440-56-4, Germanium, uses 7440-66-6, Zinc, uses 7440-69-9, Bismuth, uses 7782-42-5, Graphite, uses 9002-84-0, Ptfe 9003-53-6, Polystyrene 10361-43-0, Bismuth hydroxide 12002-78-7 12031-65-1, Lithium nickel oxide linio2 12037-30-8, Vanadium oxide v6o11 12042-37-4, Alli 12048-27-0, Bili 12057-17-9, Lithium manganese oxide limn2o4 12057-22-6, Lizn 12057-30-6 12057-33-9 12063-07-9, Iron lithium oxide fe2lio4 12162-79-7, Lithium manganese oxide limno2 12190-79-3, Cobalt lithium oxide colio2 12253-44-0 12338-02-2 12651-23-9, Titanium hydroxide 13463-67-7, Titanium oxide, uses 14475-63-9, Zirconium hydroxide 15365-14-7, Iron lithium **phosphate** felipo4 18282-10-5, Tin dioxide 21324-40-3, Lithium **hexafluorophosphate** 21651-19-4, Tin oxide sno 24937-79-9, Polyvinylidene fluoride 25014-41-9, Polyacrylonitrile 25322-68-3, Peo 25322-69-4, Polypropylene oxide 37217-08-6, Lithium titanium oxide liti2o4 39345-91-0, Lead hydroxide 50851-57-5 53262-48-9 53640-36-1 55575-96-7, Lithium silicide Li13Si4 55608-41-8 56627-44-2 61812-08-6, Lithium silicide Li21Si8 66403-10-9, Lithium boride (Li5B4) 67070-82-0 71012-86-7, Lithium boride (Li7B6) 74083-26-4 76036-33-4, Lithium silicide Li12Si7 106494-93-3, Lithium silicide Li21Si5 **126213-51-2**, Poly(3,4-ethylenedioxythiophene) 136511-06-3, MEEP 144419-56-7, Cobalt lithium magnesium oxide Co0.95LiMg0.05O2 496816-56-9 496816-57-0, Cobalt lithium magnesium oxide (Co0.95Li0.95Mg0.05O1.9) 496816-58-1, Iron lithium zirconium **phosphate** (Fe0.98LiZr0.02(PO4))

(battery structures, self-organizing structures, and related methods)

L41 ANSWER 25 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:814484 HCAPLUS
DOCUMENT NUMBER: 137:319183
TITLE: Production process for niobium capacitor
INVENTOR(S): Omori, Kazuhiro; Naito, Kazumi; Fukunaga, Hirofumi
PATENT ASSIGNEE(S): Showa Denko K. K., Japan
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002084687	A1	20021024	WO 2002-JP3574	2002 0410
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2442229	AA	20021024	CA 2002-2442229	2002 0410
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EP 1380039	A1	20040114	EP 2002-717098	2002 0410
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1505823	A	20040616	CN 2002-807111	2002 0410
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JP 2002373834	A2	20021226	JP 2002-108893	2002 0411
			<--	
US 2004111849	A1	20040617	US 2003-474311	2003 1007
			<--	
PRIORITY APPLN. INFO.:			JP 2001-113391 A	2001 0412

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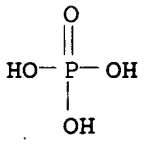
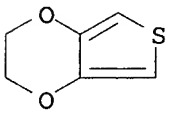
US 2001-284207P P
2001
0418
<--
WO 2002-JP3574 W
2002
0410
<--

AB A process for producing a Nb capacitor, comprising a step of exposing the dielec. oxide layer to a temperature of 100 to 1400° as any one of steps and a capacitor obtained by the production process of the present invention has an excellent LC properties, and the reduction in the capacitance due to application of d.c. bias is small.

IT **7664-38-2**, **Phosphoric acid**, processes
(electroforming agent; production process for niobium capacitor)
RN 7664-38-2 HCAPLUS
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



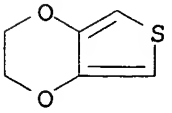
IT **126213-50-1**, 3,4-Ethylenedioxythiophene
(production process for niobium capacitor)
RN 126213-50-1 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro- (9CI) (CA INDEX NAME)



IT **126213-51-2P**, Poly(3,4-ethylenedioxythiophene)
(production process for niobium capacitor)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01G009-052
ICS H01G009-042; H01G009-04
CC 76-10 (Electric Phenomena)

Section cross-reference(s): **38**, 72
IT **7664-38-2**, **Phosphoric acid**, processes
(electroforming agent; production process for niobium capacitor)
IT **126213-50-1**, 3,4-Ethylenedioxythiophene
(production process for niobium capacitor)
IT 1313-96-8P, Niobium pentoxide 30604-81-0P, Polypyrrole
126213-51-2P, Poly(3,4-ethylenedioxythiophene)
(production process for niobium capacitor)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 26 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:638051 HCAPLUS
DOCUMENT NUMBER: 137:176923
TITLE: **Light emitting** device and method of manufacturing the same
INVENTOR(S): Yamagata, Hirokazu; Yamazaki, Shunpei; Takayama, Toru
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 44 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002113248	A1	20020822	US 2002-73284 <--	2002 0213
SG 102681	A1	20040326	SG 2002-2665 <--	2002 0204
CN 1372325	A	20021002	CN 2002-104596 <--	2002 0209
JP 2002334790	A2	20021122	JP 2002-38053 <--	2002 0215
TW 556358	B	20031001	TW 2002-91102832 <--	2002 0219
JP 2005135929	A2	20050526	JP 2005-37682 <--	2005 0215
PRIORITY APPLN. INFO.:			JP 2001-41195 A <--	2001 0219
			JP 2002-38053 A3	

2002
0215

<--

AB **Light-emitting** device comprising a thin-film **transistor** on an insulator; an interlayer insulating film on the thin film **transistor**; a first insulating film on the interlayer insulating film; an anode on the first insulating film; a wiring line for elec. connecting the thin film **transistor** to the anode; a bank over the first insulating film, edge portions of the anode, and wiring; a second insulating film on the anode and the bank; an organic compound layer over the anode with the second insulating film interposed between them; and a cathode on the organic compound layer are described in which the first insulating film comprise ≥1 of a diamond-like carbon film, a silicon nitride film, and/or a cured film formed by plasma treatment using ≥1 of hydrogen, nitrogen, halogenated carbon, hydrogen fluoride, and rare gas. Devices are also described which comprise a thin film **transistor** on an insulator; a first interlayer insulating film over the thin film **transistor**; an electrode over the first interlayer insulating film; a wiring line for elec. connecting the thin film **transistor** to the electrode, over the first interlayer insulating film; a second interlayer insulating film over the first interlayer insulating film, the electrode, and the wiring line; and an antistatic film over the second interlayer insulating film. Methods for fabricating the devices are also described.

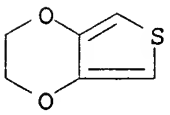
IT **126213-51-2**, Polyethylene dioxythiophene
(**light-emitting** devices and their fabrication)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01L027-15
ICS H01L031-12; H01L033-00; H01L031-0336; H01L031-062; H01L023-62

INCL 257187000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76

ST **light emitting** device fabrication

IT **Phosphates**, uses
(alkyl; **light-emitting** devices and their fabrication)

IT Fatty acids, uses
(esters; **light-emitting** devices and their fabrication)

IT Hydrocarbons, uses
(halo; **light-emitting** devices and their

fabrication)
IT **Electroluminescent** devices
Semiconductor device fabrication
(**light-emitting** devices and their fabrication)
IT Ethers, uses
Polyanilines
(**light-emitting** devices and their fabrication)
IT Betaines
Noble gases, uses
(**light-emitting** devices and their fabrication)
IT Vapor deposition process
(plasma; in **light-emitting** device fabrication)
IT Quaternary ammonium compounds, uses
(tetraalkyl; **light-emitting** devices and their fabrication)
IT 7440-44-0, Carbon, uses
(diamond-like; **light-emitting** devices and their fabrication)
IT 1333-74-0, Hydrogen, uses 7440-42-8, Boron, uses 7723-14-0, Phosphorus, uses 51325-91-8, DCM (dye)
(**light-emitting** devices and their fabrication)
IT 2085-33-8, Tris(8-hydroxyquinolinato)aluminum 7440-21-3, Silicon, uses 7440-32-6, Titanium, uses 7440-33-7, Tungsten, uses 7631-86-9, Silicon oxide, uses 11105-01-4, Silicon oxynitride 11106-92-6 12033-62-4, Tantalum nitride (TaN) 12033-89-5, Silicon nitride, uses 24304-00-5, Aluminum nitride 50926-11-9, Indium tin oxide 117944-65-7, Indium zinc oxide **126213-51-2**, Polyethylene dioxythiophene 139320-42-6, Silicon hydride nitride oxide
(**light-emitting** devices and their fabrication)
IT 141-43-5D, Monoethanolamine, alkyl compds. 7664-39-3, Hydrogen fluoride, uses 7727-37-9, Nitrogen, uses
(**light-emitting** devices and their fabrication)

L41 ANSWER 27 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:610369 HCAPLUS
DOCUMENT NUMBER: 137:161234
TITLE: Thin-film inorganic **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices
INVENTOR(S): Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1231251	A1	20020814	EP 2001-7	2001 0207 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002151094	A1	20021017	US 2002-54243	2002 0124 <--
US 6706551	B2	20040316		
JP 2002246177	A2	20020830	JP 2002-25508	2002 0201 <--
PRIORITY APPLN. INFO.:			EP 2001-7 A	2001 0207 <--
			US 2001-271126P P	2001 0223 <--

AB Methods for manufacturing of thin-film inorg. **light-emitting** diodes are disclosed which entail (1) preparing a nanoparticle dispersion of ZnS doped with a **luminescent** center by precipitation from appropriate aqueous solns. comprising Zn ions, sulfide ions and dopant ions, (2) washing the dispersion to remove non-precipitated ions, either (3) mixing the washed dispersion of doped ZnS (n-type semiconductor) with a water-compatible p-type semiconductive polymer, (4) coating the mixture, optionally admixt. with a binder, onto a 1st conductive electrode, (5) applying on top of the coated layer resulting from step (4) a 2nd conductive electrode, with the proviso that ≥1 of the electrodes is transparent, or, (3') coating on top of a 1st conductive layer a double layer pack comprising, in either (3'a) a layer containing a water-compatible p-type semiconductive polymer, and, a layer containing the washed dispersion of doped ZnS, optionally admixed with a binder, (4') applying on top of the coated layer pack resulting from step (3') a conductive electrode, with the proviso that ≥1 of the electrodes is transparent. Thin film inorg. **light-emitting** diodes manufactured according to the above method are also described.

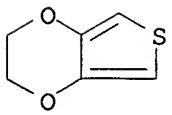
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene) (semiconductive polymer containing; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM C09K011-06
ICS C01G009-08
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76, 78
ST film inorg **light emitting** diode fabrication
IT **Electroluminescent** devices
(green-emitting, and orange-emitting; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT **Polyphosphoric acids**
(sodium salts, washing solution containing; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT Polyesters, uses
(substrate; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT **Electronic device** fabrication
(thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT **Electroluminescent** devices
(thin-film; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT 50926-11-9, Indium tin oxide
(anode; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT 9003-39-8, LUVISKOL K90
(binder; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT 7429-90-5, Aluminum, uses
(cathode; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT 60-00-4, EDTA, uses 7647-14-5, Sodium chloride, uses
(copper-doped zinc sulfide particles formation in dispersion using; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT 7439-95-4, Magnesium, uses 7440-50-8, Copper, uses 15158-11-9, Copper(2+), uses 17493-86-6, Copper(1+), uses 22537-22-0, Magnesium(2+), uses
(dopant; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)
IT 1393-03-9, Quillajasaponin
(doped zinc sulfide particles formation in dispersion using;

thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)

IT 2503-56-2
(manganese-doped zinc sulfide particles formation in dispersion using; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)

IT 50851-57-5 **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(semiconductive polymer containing; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)

IT 25038-59-9, Poly(ethylene terephthalate), uses
(substrate; thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)

IT 1314-98-3P, Zinc sulfide (ZnS), uses
(thin-film inorg. **light-emitting** diodes containing doped ZnS **luminescent** layer and methods for fabricating the devices)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 28 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:610368 HCAPLUS
DOCUMENT NUMBER: 137:147615
TITLE: Manufacturing of a thin film inorganic **light emitting** diode
INVENTOR(S): Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: Eur. Pat. Appl., 26 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1231250	A1	20020814	EP 2001-6 <--	2001 0207
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003003614	A1	20030102	US 2002-53990 <--	2002 0124
US 6602731	B2	20030805		
JP 2002313568	A2	20021025	JP 2002-28059 <--	2002 0205
PRIORITY APPLN. INFO.:			EP 2001-6 A <--	2001 0207

US 2001-271137P P
2001
0223

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AB A method for fabricating a Thin Film Inorg. **Light Emitting** Diode device is described entailing (1) preparing a nanoparticle dispersion comprising together ZnS doped with a **luminescent** center (n-type semiconductor) and CuxS (p-type semiconductor) by precipitation from appropriate aqueous solns. of the resp. ions, or, (1') preparing a first sep. nanoparticle dispersion of ZnS doped with a **luminescent** center (n-type semi- conductor) and a second sep. nanoparticle dispersion of CuxS (p-type semiconductor), both by precipitation from appropriate aqueous solns. of the resp. ions, (2) washing the dispersion prepared according to (1) or both dispersions prepared according to (1') to remove non-precipitated ions, (3) coating onto a first conductive electrode the dispersion resulting from steps (1) and (2), or a mixture of dispersions resulting from steps (1') and (2) in one and the same layer, or the sep. dispersions resulting from steps (1') and (2) in two sep. layers, (4) applying on top of said coated layer(s) resulting from step (3) a second conductive electrode, with the proviso that at least one of said first and second electrodes is transparent. A thin film inorg. **light emitting** diode fabricated by the method is also described.

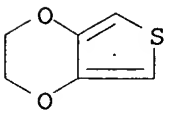
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(coating; fabrication of thin film inorg. **light emitting** diode)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM C09K011-06
ICS C01G009-08

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76

ST film **light emitting** diode fabrication

IT **Electroluminescent** devices
Electronic device fabrication
(fabrication of thin film inorg. **light emitting** diode)

IT **Polyphosphates**
Polyphosphoric acids
(fabrication of thin film inorg. **light emitting** diode)

IT 50851-57-5, Polystyrene sulfonic acid
(binder; fabrication of thin film inorg. **light emitting** diode)

IT 9002-89-5, Polyvinyl alcohol 9003-39-8, LUVISKOL K-90
(binder; fabrication of thin film inorg. **light emitting** diode)
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(coating; fabrication of thin film inorg. **light emitting** diode)
IT 7429-90-5, Aluminum, uses 50926-11-9, Indium tin oxide
(electrode; fabrication of thin film inorg. **light emitting** diode)
IT 1314-98-3, Zinc sulfide (ZnS), uses 11115-78-9, Copper sulfide
(fabrication of thin film inorg. **light emitting** diode)
IT 7439-96-5, Manganese, uses 7440-50-8, Copper, uses
(fabrication of thin film inorg. **light emitting** diode)
IT 96-27-5, Thioglycerol 13478-98-3, **Hexametaphosphate**
(fabrication of thin film inorg. **light emitting** diode)
IT 1313-84-4, Sodium sulfide nonahydrate 5970-45-6, Zinc diacetate dihydrate 6156-78-1, Manganese diacetate tetrahydrate 7447-39-4, Copper dichloride, reactions 19417-15-3, Zinc chloride dihydrate 21482-52-0, Copper diacetate tetrahydrate
(fabrication of thin film inorg. **light emitting** diode)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 29 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:610367 HCAPLUS
DOCUMENT NUMBER: 137:147614
TITLE: Manufacturing of a thin film inorganic **light emitting** diode
INVENTOR(S): Andriessen, Hieronymus
PATENT ASSIGNEE(S): Agfa-Gevaert, Belg.
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1231249	A1	20020814	EP 2001-5	2001 0207
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002153830	A1	20021024	US 2002-50667	2002 0116
			<--	
US 6737293	B2	20040518		
JP 2002305082	A2	20021018	JP 2002-26916	2002 0204
			<--	

PRIORITY APPLN. INFO.: EP 2001-5 A 2001 0207 <--
US 2001-271306P P 2001 0223 <--

AB A method of fabricating a Thin Film Inorg. **Light Emitting** Diode device is described entailing in order, (1) preparing a nanoparticle dispersion of ZnS doped with a **luminescent** center by precipitation from appropriate aqueous solns. comprising zinc ions, sulfide ions and dopant ions, (2) washing the dispersion of doped ZnS to remove non-precipitated ions, (3) coating onto a first conductive electrode the washed dispersion of doped ZnS, optionally after admixt. with a binder, (4) applying on top of the coated layer resulting from step (3) a second conductive electrode, with the proviso that at least one of the first and second electrode is transparent. A thin film inorg. **light emitting** diode fabricated by the method is also described.

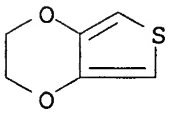
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(thin film inorg. **light emitting** diode fabrication using)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM C09K011-06
ICS C01G009-08

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76

ST film **light emitting** diode fabrication

IT **Electroluminescent** devices
Electronic device fabrication
(thin film inorg. **light emitting** diode fabrication)

IT **Polyphosphates**
Polyphosphoric acids
(thin film inorg. **light emitting** diode fabrication using)

IT 7429-90-5, Aluminum, uses 50851-57-5, Polystyrene sulfonic acid 50926-11-9, Indium tin oxide **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(thin film inorg. **light emitting** diode fabrication using)

IT 7439-96-5, Manganese, uses 7440-50-8, Copper, uses 15158-11-9, Copper(2+), uses 16397-91-4, Manganese(2+), uses

(thin film inorg. **light emitting** diode fabrication using)
IT 1314-98-3, Zinc sulfide (ZnS), uses
(thin film inorg. **light emitting** diode fabrication using)
IT 9003-39-8, LUVISKOL K-90
(thin film inorg. **light emitting** diode fabrication using)
IT 1313-84-4, Sodium sulfide nonahydrate 5970-45-6, Zinc acetate dihydrate 7646-85-7, Zinc chloride, reactions 7758-89-6, Copper chloride 21482-52-0, Copper diacetate tetrahydrate
(thin film inorg. **light emitting** diode fabrication using)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 30 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:408395 HCAPLUS
DOCUMENT NUMBER: 136:393076
TITLE: **Electroluminescent** device with phosphor component
INVENTOR(S): Mishima, Masayuki; Okada, Hisashi; Araki, Katsumi; Qiu, Xue-Peng; Ise, Toshihiro
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002158091	A2	20020531	JP 2000-350170 <--	2000 1116
US 2002096995	A1	20020725	US 2001-987639 <--	2001 1115
US 6818325	B2	20041116		
PRIORITY APPLN. INFO.:			JP 2000-350170 A <--	2000 1116

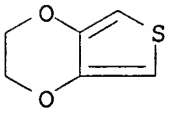
AB The invention refers to an **electroluminescent** device with an electron transport layer and an organic layer comprising a hole transport layer and a **luminescent** phosphor layer in a two or three **layer structure** for increased brightness and reduced costs.
IT **155090-83-8**, Baytron P
(**electroluminescent** component)
RN 155090-83-8 HCAPLUS
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-51-2
CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S



CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS

D1— CH═ CH_2

D1— SO_3H

IC ICM H05B033-14
ICS C09K011-06; H05B033-10; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
ST **electroluminescent** device phosphor
IT **Electroluminescent** devices
Phosphors
(**electroluminescent** component)
IT 6726-80-3 25067-59-8, Polyvinyl carbazole 50926-11-9, ITO 58328-31-7, 4,4'-N,N'-Dicarbazolylbiphenyl 65181-78-4, N, N'-Bis(3-methylphenyl)-N,N'-diphenylbenzidine 94928-86-6 **155090-83-8**, Baytron P 313950-73-1 358974-66-0 377092-02-9 428455-07-6
(**electroluminescent** component)

L41 ANSWER 31 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:315263 HCAPLUS
DOCUMENT NUMBER: 136:317969
TITLE: Polymer switching element
INVENTOR(S): Janietz, Silvia; Wedel, Armin
PATENT ASSIGNEE(S): Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Germany
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002033762	A1	20020425	WO 2001-EP11987	2001 1016 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10051369	A1	20020502	DE 2000-10051369	2000 1017 <--
AU 2002021691	A5	20020429	AU 2002-21691	2001 1016 <--
EP 1334526	A1	20030813	EP 2001-987951	2001 1016 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:			DE 2000-10051369 A	2000 1017 <--
			WO 2001-EP11987 W	2001 1016 <--

AB The invention relates to novel polymer switching elements comprising (1) a hole-injection electrode, (2) a polymer hole transport layer, (3) a polymer electron transport layer and (4) an electron injecting electrode. The polymeric switching element is exemplified in several forms: (1) an n-conductive polymer between two p-conductive materials, for example, PTPA/PODX/PTPA (PTPA = polythienylpolyamide, PODX = polyoxadiazol); (2) a p-conductive

polymer between two n-conductive materials, for example, PODX/PTPA/PODX; (3) an n-conductive polymer between two conductive electrodes, for example, BAYTRON/PODX/BAYTRON, or; (4) an n-conductive polymer between two p-conductive materials on conductive electrodes, for example, BAYTRON/PTPA/PODX/PTPA. A bipolar **transistor** is constructed with the **layer structure** ITO/PTPA/Al/PODX/Al.

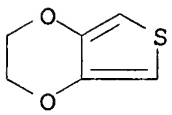
IT **126213-51-2**, Polyethylenedioxythiophene
(BAYTRON; polymer switching element with)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01L051-30
ICS H01L051-20

CC 76-3 (Electric Phenomena)
Section cross-reference(s): 38

IT **Electronic device** fabrication
(polymer switching element)

IT **126213-51-2**, Polyethylenedioxythiophene
(BAYTRON; polymer switching element with)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 32 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:299602 HCAPLUS

DOCUMENT NUMBER: 137:147425

TITLE: Air-stable organic polymer red **light-emitting** devices on flexible plastic substrates

AUTHOR(S): Hong, Yongtaek; He, Zhiqi; Lee, Shujen; Kanicki, Jerzy

CORPORATE SOURCE: Organic & Molecular Electronics Research Group, Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, MI, 48109, USA

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (**2002**), 4464(Organic Light-Emitting Materials and Devices V), 329-335
CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Organic polymer red **light-emitting** devices (OPLEDs) with the double **layer structure** were

fabricated on flexible plastic substrates. Dow red emissive polymer and poly(3,4-ethylenedioxythiophene)/poly(styrene)(PEDOT/PSS) were used as an emissive and a hole injection polymer, resp. The spin coating technique was used to deposit different polymers. The absorption and the cyclic voltammetry spectra were used to construct the band diagram of the authors' OPLEDs. The following elec. and optical properties were obtained for the authors' OPLEDs: turn-on voltage, defined at 1 cd/m2 = .apprx.3.0 V; voltage and c.d. defined at 100 cd/m2 = .apprx.6.5 V and .apprx.34 mA/cm2; maximum emission efficiency .simeq.0.25 cd/A; and maximum **luminous** efficiency .simeq.0.1 m/W. The extrapolated lifetime of unpackaged OPLEDs on flexible plastic substrate of .apprx.1160 min for initial brightness of 100 cd/m2 was obtained.

IT **155090-83-8**
(air-stable organic polymer red **light-emitting** devices on flexible plastic substrates)

RN 155090-83-8 HCAPLUS

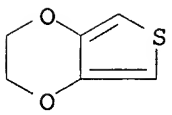
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-51-2
CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S



CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS

D1— CH═ CH_2

D1— SO_3H

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
ST polymer red LED **electroluminescent** device band gap UV absorption
IT Band gap
Cyclic voltammetry
Electroluminescent devices
Luminescence
Luminescence, electroluminescence
UV and visible spectra
(air-stable organic polymer red **light-emitting** devices on flexible plastic substrates)
IT **155090-83-8**
(air-stable organic polymer red **light-emitting** devices on flexible plastic substrates)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 33 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:229674 HCAPLUS
DOCUMENT NUMBER: 137:70177
TITLE: New regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes
AUTHOR(S): Tonzola, Christopher J.; Alam, Maksudul M.; Jenekhe, Samson A.
CORPORATE SOURCE: Dep. Chem. Eng., Chemistry, Univ. Washington, Seattle, WA, 98195-1750, USA
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (**2002**), 43(1), 109-110
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer Chemistry
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB The synthesis and evaluation of green **light emitting** diodes from the novel polyquinoline are presented. Indium-Sn-oxide was used as the anode, PEDOT as a hole transport layer, poly(2,2'-dioctyl-2,2'-bithienylene-6,6-bis(4-phenylquinoline)) as emissive layer, and Al as the cathode. SPEX Fluorolog-2 fluorometer was used to measure **electroluminescence** (EL) and photoluminescence spectra. The polymer was soluble in organic solvents, facilitating improved processability and device fabrication. It has the potential as

both an electron transport and emissive material. Green EL with an external EL efficiency of 0.06% was observed in POBTPQ.

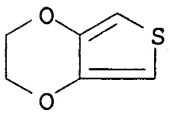
IT **126213-51-2**, PEDOT
(new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, **38**

ST polyquinoline **light emitting** diode green illumination; **electroluminescence** conjugated polymer thiophene based

IT Oxidation, electrochemical
(irreversible; new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

IT Band gap
Electroluminescent devices
Ionization potential
Luminescence
UV and visible spectra
(new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

IT Reduction, electrochemical
(reversible; new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

IT 439131-97-2P
(POBTPQ; new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

IT 7429-90-5, Aluminum, uses 50926-11-9, Indium tin oxide **126213-51-2**, PEDOT
(new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

IT 71713-10-5P 439131-96-1P
(new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

IT 108-39-4, m-Cresol, reactions 838-85-7, **Diphenylphosphate** 138058-53-4, 3,3'-Dioctyl-2,2'-bithiophene
(new regioregular **electroluminescent** conjugated polymer for green **light-emitting** diodes)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L41 ANSWER 34 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:197561 HCAPLUS
DOCUMENT NUMBER: 137:25868
TITLE: Blue **light emitting** diodes with bathocuproine layer
AUTHOR(S): Troadec, D.; Veriot, G.; Moliton, A.
CORPORATE SOURCE: Faculty of Sciences, EA 1072, UMOP, University of Limoges, Limoges, 87060, Fr.
SOURCE: Synthetic Metals (**2002**), 127(1-3), 165-168
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English

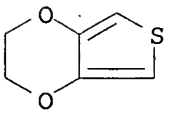
AB Several hole transport mols. (N,N'-diphenyl-N,N'-(3-methylphenyl)-1,1'-biphenyl-4,4'-diamine; 4,4-bis[N-(1-naphthyl)-N-phenylamino]biphenyl; 4,4',4''-tris[N-(1-naphthyl)-N-phenylamino]triphenylamine (TNATA); MTDATA) are blue **light emitters** [SPIE 3797(1999) 120]. Realization of monolayer structures is very easy but their performances are too weak. To improve them, the authors have built some multilayer structures with electron transport layer (tris(8-hydroxyquinolinate) Al (Alq3); bis(10-hydroxybenzo(h)quinolinate) Be (Bebq2)) and a bathocuproine (BCP) layer to confine the radiative recombinations in the hole transport layer. To improve hole injection, the authors inserted poly(3,4-ethylenedioxythiophene) (PEDOT) layer between the In-Sn-oxide anode and the hole transporting layer. The best results were obtained with the four-**layer structure** PEDOT/TNATA/BCP/Bebq2 (λ=508 nm), **luminance** = 5500 cd/m2 at 10.2 V.

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
155090-83-8
(blue **light emitting** diodes with bathocuproine layer)

RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



RN 155090-83-8 HCAPLUS
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

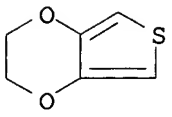
CM 1

CRN 126213-51-2

CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S



CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS

D1—CH═CH$_2$

D1—SO$_3$H

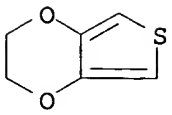
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76
ST blue **light emitting** diode LED bathocuproine layer
IT Radiative recombination
(blue **light emitting** diodes with bathocuproine layer)
IT **Electroluminescent** devices
(blue; blue **light emitting** diodes with bathocuproine layer)
IT 50926-11-9, Indium tin oxide **126213-51-2**, Poly(3,4-ethylenedioxythiophene) **155090-83-8**
(blue **light emitting** diodes with bathocuproine layer)
IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato) 4733-39-5, Bathocuproine 65181-78-4, TPD 123847-85-8, NPD 148896-39-3 185690-39-5, 4,4',4''-Tris[N-(1-naphthyl)-N-

phenylamino]triphenylamine
(blue **light emitting** diodes with
bathocuproine layer)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 35 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:102888 HCAPLUS
DOCUMENT NUMBER: 136:238752
TITLE: Controlling exciton diffusion in multilayer white phosphorescent organic **light emitting** devices
AUTHOR(S): D'Andrade, Brian W.; Thompson, Mark E.; Forrest, Stephen R.
CORPORATE SOURCE: Center for Photonics and Optoelectronic Materials (POEM), Princeton Materials Institute (PMI), Department of Electrical Engineering, Princeton University, Princeton, NJ, 08544, USA
SOURCE: Advanced Materials (Weinheim, Germany) (**2002**), 14(2), 147-151
CODEN: ADVMEW; ISSN: 0935-9648
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The combination of 2 multilayer organic **light emitting** diodes and blue, yellow, and red phosphor doped emissive regions was used to efficiently produce white light. Two white OLED (WOLED) structures were used, i.e., device 1 is a 3 phosphor structure and device 2 is a blocking **layer structure.** At λ = 520-600 nm, device 2 had almost no **electroluminescent** spectra emission, while device 1 had considerably more emission from bis(2-phenylbenzothiozolato-N-C2)iridium(acetylacetonate) (Bt2Ir(acac)) in this region. The addnl. doped layer improved the efficiency of device 2 as compared to device 1 by boosting the yellow emission where the human eye had the highest photonic response efficiency, and using Bt2Ir(acac). The multi-emissive layer fully electrophosphorescent WOLEDs could take advantage of the diffusion of triplets to produce bright white devices with high power and quantum efficiencies. The device color could be tuned by varying the thickness and the dopant concns. in each layer, and by introducing exciton blocking layers between emissive layers.
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(controlling exciton diffusion in multilayer white phosphorescent organic **light emitting** devices)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38, 76
ST white polymer **light emitting** diode multilayer exciton diffusion
IT **Electroluminescent** devices
Exciton
Luminescence, electroluminescence
(controlling exciton diffusion in multilayer white phosphorescent organic **light emitting** devices)
IT 4733-39-5, 2,9-Dimethyl-4,7-diphenyl-1,10-phenanthroline
50851-57-5, Poly(styrene sulfonic acid) 58328-31-7 123847-85-8
126213-51-2, Poly(3,4-ethylenedioxythiophene)
337526-88-2 343978-79-0 376367-93-0
(controlling exciton diffusion in multilayer white phosphorescent organic **light emitting** devices)
IT 94928-86-6, Tris(2-phenylpyridine)iridium
(controlling exciton diffusion in multilayer white phosphorescent organic **light emitting** devices)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 36 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:851747 HCAPLUS
DOCUMENT NUMBER: 135:378571
TITLE: Organic **electroluminescent** element and method of manufacturing the same
INVENTOR(S): Morii, Katsuyuki
PATENT ASSIGNEE(S): Seika Epson Corporation, Japan
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001044035	A1	20011122	US 2001-811618	2001 0320
			<--	
US 6617052	B2	20030909		
JP 2001338755	A2	20011207	JP 2000-359882	2000 1127
			<--	
CN 1317922	A	20011017	CN 2001-111766	2001 0321
			<--	

PRIORITY APPLN. INFO.: JP 2000-78662 A 2000 0321
<--
JP 2000-359882 A 2000 1127
<--

AB Organic **electroluminescent** elements comprising a substrate and at least a cathode, an anode, and an organic **light-emitting** layer sandwiched between the cathode and anode with at least the face of the laminate opposite the substrate side being sealed by a sealant having a two-**layer structure** including an inner first sealing layer and an outer second sealing layer are described in which the first sealing layer comprises an alkali metal halide or alkaline earth metal halide and the second sealing layer comprises a moisture-proof resinous material. Methods of manufacturing the elements are also described which entail forming the multilayered structure on a substrate; forming the first sealing layer at least on the upper face of the formed structure in an atmospheric substantially free from oxygen and water; and forming the second sealing layer of a moisture proof resinous material on the outer side of the first sealing layer in an atmospheric substantially free from oxygen and water.

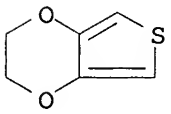
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(polystyrene sulfonate-doped; organic **electroluminescent** devices with inorg./polymer laminate sealing layers and their production)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H05B033-04
ICS H05B033-10

INCL 428690000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76

ST org **electroluminescent** device multilayer sealing laminate

IT Semiconductor device fabrication
(organic **electroluminescent** devices with inorg./polymer laminate sealing layers and their production)

IT Alkali metal halides, uses
Alkaline earth halides
Epoxy resins, uses
(organic **electroluminescent** devices with inorg./polymer laminate sealing layers and their production)

IT **Electroluminescent** devices
(organic; organic **electroluminescent** devices with inorg./polymer laminate sealing layers and their production)
IT 7429-90-5, Aluminum, uses 7440-70-2, Calcium, uses 7789-24-4, Lithium fluoride, uses 95270-88-5D, Polyfluorene, derivs. 117944-65-7, Indium zinc oxide 263759-13-3, DP 60 (adhesive)
(organic **electroluminescent** devices with inorg./polymer laminate sealing layers and their production)
IT 50851-57-5
(polyethylene dioxythiophene doped with; organic **electroluminescent** devices with inorg./polymer laminate sealing layers and their production)
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(polystyrene sulfonate-doped; organic **electroluminescent** devices with inorg./polymer laminate sealing layers and their production)

L41 ANSWER 37 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:745625 HCAPLUS
DOCUMENT NUMBER: 135:297194
TITLE: Manufacture of electroconductive polymer compositions, their precursors, and solid electrolytic capacitors employing valve metal electrodes
INVENTOR(S): Akami, Kenji; Kudo, Yasuo; Kusayanagi, Hiroki; Matsuya, Yasue
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001283655	A2	20011012	JP 2000-97331	2000 0331
			<--	
JP 3536772	B2	20040614		
US 6602741	B1	20030805	US 2000-660447	2000 0912
			<--	
US 2003147202	A1	20030807	US 2003-337369	2003 0107
			<--	
US 6793690	B2	20040921		
US 2004184221	A1	20040923	US 2004-815803	2004 0402
			<--	
US 6853540	B2	20050208		
PRIORITY APPLN. INFO.:			JP 1999-260122 A	1999 0914

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JP 1999-332303 A 1999 1124
<--
JP 2000-97331 A 2000 0331
<--
JP 2000-142843 A 2000 0516
<--
JP 2000-188927 A 2000 0623
<--
US 2000-660447 A3 2000 0912
<--
US 2003-337369 A3 2003 0107

AB The compns. are prepared by addition of F (suitably perfluoroalkyl)-containing surfactants (and binders) to solns. or dispersions of conducting polymers and removal of solvents or dispersants. Precursors of the compns., e.g. solns. or dispersions containing the surfactants are also claimed. The precursors are applied on capacitor dielec. layers comprising anodized valve metals and freed of volatiles to form cathodes in good conformability and with high withstand voltage.

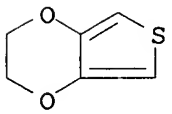
IT **126213-51-2P**, Poly(3,4-ethylenedioxythiophene)
(preparation of surfactant-added conducting polymer compns. for high-withstand-voltage cathodes of solid electrolytic capacitors)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

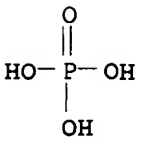
CRN 126213-50-1
CMF C6 H6 O2 S



IT **7664-38-2D, Phosphoric acid,**
perfluoroalkyl esters, processes
(surfactants; preparation of surfactant-added conducting polymer compns. for high-withstand-voltage cathodes of solid electrolytic capacitors)

RN 7664-38-2 HCAPLUS

CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM H01B013-00
ICS H01G009-028
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 38, 46, 57
IT 30604-81-0P, Polypyrrole **126213-51-2P**,
Poly(3,4-ethylenedioxythiophene)
(preparation of surfactant-added conducting polymer compns. for high-withstand-voltage cathodes of solid electrolytic capacitors)
IT **7664-38-2D, Phosphoric acid**,
perfluoroalkyl esters, processes 25322-68-3D, Oxirane homopolymer, perfluoroalkyl derivs.
(surfactants; preparation of surfactant-added conducting polymer compns. for high-withstand-voltage cathodes of solid electrolytic capacitors)

L41 ANSWER 38 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:729919 HCAPLUS
DOCUMENT NUMBER: 135:295965
TITLE: Method of manufacturing organic EL element, organic EL element
INVENTOR(S): Fujimori, Natsuo; Ishida, Masaya
PATENT ASSIGNEE(S): Seiko Epson Corp., Japan
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1139455	A2	20011004	EP 2001-302851	2001 0327 <--
EP 1139455	A3	20030521		
EP 1139455	B1	20051102		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TW 490997	B	20020611	TW 2001-90106798	2001 0322 <--
CN 1320011	A	20010330	CN 2001-112230	2001 0330 <--
US 2002016031	A1	20020207	US 2001-820759	2001

0330
<--
US 6610552 B2 20030826
JP 2002237383 A2 20020823 JP 2001-101312
2001
0330
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US 2003211643 A1 20031113 US 2003-465856
2003
0620
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PRIORITY APPLN. INFO.: JP 2000-98159 A
2000
0331
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JP 2000-371723 A
2000
1206
<--
US 2001-820759 A3
2001
0330
<--

AB Methods of manufacturing an organic **electroluminescent** element including a cathode, an anode, and ≥1 constitutive layers, including at least a **light emitting** layer, sandwiched between the cathode and anode which entail selectively placing a liquid containing a material for the formation of constitutive layer in an appropriate region using a pattern having an opening corresponding to the region for the formation of constitutive layer ADIW, in the liquid placing step, an ultrathin organic film pattern having a surface repellent to the liquid is formed as the pattern, using a compound having a functional group which bonds to the face on which the film is formed and a functional group repellent to the liquid Organic **electroluminescent** elements comprising a cathode and an anode, and a **light emitting** layer, a hole injecting layer and/or a hole transporting layer sandwiched between the cathode and the anode are described in which at least one of the **light emitting** layer and the hole injecting layer and/or the hole transporting layer is surrounded with a barrier, the barrier having a two-**layer structure** composed of a thin insulating film layer and an ultrathin organic film layer formed on the thin insulating film layer, the ultrathin organic film layer having a liquid-repellent surface and being formed by using a compound having a functional group being bondable to the constitutive atom of a face on which the film is formed, and a functional group being repellent to the liquid

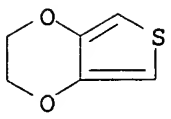
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene) (polystyrene sulfonate-doped; organic **electroluminescent** elements and their fabrication using liquid-repellent films for patterning)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01L051-20
ICS H01L051-40
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76
ST org **electroluminescent** element fabrication liq repellent film
IT Semiconductor device fabrication
(organic **electroluminescent** elements and their fabrication using liquid-repellent films for patterning)
IT **Electroluminescent** devices
(organic; organic **electroluminescent** elements and their fabrication using liquid-repellent films for patterning)
IT 919-30-2, Aminopropyltriethoxysilane 2550-04-1, Allyltriethoxysilane 7429-90-5, Aluminium, uses 7440-70-2, Calcium, uses 7631-86-9, Silica, uses 26009-24-5, Poly(1,4-phenylene-1,2-ethenediyl) 83048-65-1 95270-88-5, Polyfluorene
(organic **electroluminescent** elements and their fabrication using liquid-repellent films for patterning)
IT 50851-57-5
(polyethylene dioxythiophene doped with; organic **electroluminescent** elements and their fabrication using liquid-repellent films for patterning)
IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(polystyrene sulfonate-doped; organic **electroluminescent** elements and their fabrication using liquid-repellent films for patterning)

L41 ANSWER 39 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:687673 HCAPLUS
DOCUMENT NUMBER: 136:12471
TITLE: Low-cost organic pulse sources for integrated optical modules
AUTHOR(S): Hiltunen, Jussi A.; Rantala, Juha T.
CORPORATE SOURCE: VTT Electronics, Oulu, FIN-90570, Finland
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (**2001**), 4284(Functional Integration of Opto-Electro-Mechanical Devices and Systems), 108-114
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The transient and steady state performance of organic **light - emitting** devices (OLEDs) was studied with a view towards suitability for pulse sources. The rise and fall times of the **electroluminescence** of the different structures and materials were afforded special attention. The tested devices cover single and multi-**layer structures** with

different layer thicknesses. Both mol. and polymeric- based devices were tested. Mol. materials used in the OLEDs were N, N'-bis(3-methylphenyl)-N,N'-diphenylbenzidine (TPD) as a hole transporter, tris-(8-hydroxyquinolate) Al (Alq3) as an electron transporter/emitter and 4,7-diphenyl-1,10-phenanthroline (BCP) as a hole blocking material. Poly(2-methoxy, 5-(2'-ethyl-hexoxy)-1,4-phenylene-vinylene) (MEH-PPV) and poly(3,4-ethylenedioxythiophene)/poly(styrene) (PEDOT/PSS) were the polymeric materials used in the devices. The effect of the driving voltage on the response time and the c.d. in transients was under study. In addition, changes in the response time were studied, when the bias voltage was applied.

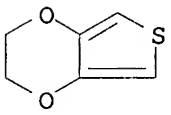
IT **375846-91-6**
(low-cost organic pulse sources for integrated optical modules containing)

RN 375846-91-6 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



CM 2

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38, 76

ST org **light emitting** device pulse source integrated optical module; delay time charge mobility bias voltage OLED

IT **Luminescence, electroluminescence**
(rise and fall times of **electroluminescence** of different structures and materials)

IT Multilayers
(tested devices cover single and multi-**layer structures** with different layer thicknesses)

IT **Electroluminescent** devices
(thin-film; low-cost organic pulse sources for integrated optical modules in)

IT **375846-91-6**
(low-cost organic pulse sources for integrated optical modules containing)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

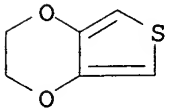
L41 ANSWER 40 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:520443 HCAPLUS
DOCUMENT NUMBER: 135:324553
TITLE: Effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers
AUTHOR(S): Choi, J.-H.; Jung, S.-H.; Kwon, S.-K.; Cho, W.-J.; Ha, C.-S.
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Materials Science & Engineering, B: Solid-State Materials for Advanced Technology (**2001**), B85(2-3), 96-99
CODEN: MSBTEK; ISSN: 0921-5107
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Blue organic **electroluminescent** devices (OELDs), having a multi-**layered structure**, were fabricated and their performance was studied. A distyryl biphenyl arylene derivative was synthesized as a blue emitting material. To improve thermal stability of the monomeric hole-transporting emissive material, poly(bisphenol A-co-4-nitro phthalic anhydride-co-1,3-phenylene diamine) was used as a matrix. For more effective design of the devices, poly(styrene sulfonate) doped poly(3,4-ethylenedioxythiophene), and 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline (bathocuproine) and tris(8-quinolinolato)aluminum (Alq3) were introduced as a buffer layer, a hole-blocking layer, and an electron-injection layer, resp. The OELDs showed bright green color when the Bathocuproine layer was not applied.

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(buffer layer, doped with poly(styrene sulfonate); effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 36, 76
ST org **electroluminescence** functional monomeric layer distyryl biphenyl arylene
IT **Electroluminescent** devices

(blue-emitting; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT Bias potential
Current density
Emissivity
Energy level
Hole transport
Luminescence, electroluminescence
UV and visible spectra
(effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT Monomers
(effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT Phosphors
(green-emitting; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT Films
(multilayer; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT Coating process
(spin; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT Vapor deposition process
(vacuum; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT 268540-82-5, DBA
(DBA, blue emitter; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT **126213-51-2**, Poly(3,4-ethylenedioxythiophene)
(buffer layer, doped with poly(styrene sulfonate); effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT 7429-90-5, Aluminum, uses
(effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT 68-12-2, Dimethylformamide, uses
(effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT 2085-33-8, Alq3
(electron-injection layer; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT 4733-39-5, Bathocuproine
(hole-blocking layer; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

IT 309924-21-8, Bisphenol A-4-nitrophthalic anhydride-1,3-phenylenediamine copolymer
(matrix; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)

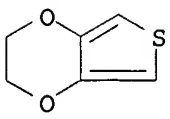
IT 50851-57-5
(poly(3,4-ethylenedioxythiophene) doped with; effective design of blue organic **electroluminescent** devices by

introducing functional monomeric layers)
IT 50926-11-9, Indium tin oxide
(substrate; effective design of blue organic **electroluminescent** devices by introducing functional monomeric layers)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 41 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:400151 HCAPLUS
DOCUMENT NUMBER: 135:187367
TITLE: **Electroluminescent** devices using a layered organic-inorganic perovskite structure as emitter
AUTHOR(S): Coelle, Michael; Bruetting, Wolfgang; Schwoerer, Markus; Yahiro, Masayuki; Tsutsui, Tetsuo
CORPORATE SOURCE: Experimentalphysik II, Universitat Bayreuth, Bayreuth, 95440, Germany
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (**2001**), 4105(Organic Light-Emitting Materials and Devices IV), 328-337
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Self-organizing layered perovskite compds. like (C6H5C2H4NH3)2PbI4 naturally form a dielec. quantum-well structure in which semiconducting PbI4 layers and organic (C6H5C2H4NH3) layers are alternately piled up. Due to their low- dimensional semiconductor nature they exhibit a strong absorption and sharp photoluminescence from the exciton band. In **electroluminescent** devices pure green emission peaking at 520 nm with a very narrow half-width of .apprx.10 nm is reported. As the organic-inorg. **layered structure** has promising properties for EL-devices, the authors studied two- and three **layer structures** using this perovskite as emitter material in combination with addnl. hole and electron injection layers. To get more insight into elec. properties and **electroluminescence**- mechanisms of this material, temperature dependent current- voltage-**luminance** characteristics were measured, showing an increasing onset-voltage for current flow from 2.6 V at room temperature to .apprx.8.8 V at 80 K. **Electroluminescence** is detected at temps. <150 K with onset voltages of .apprx.13 V. At liquid N temperature efficiencies of 0.7 cd/A at 100 cd/m2 and 1.8 cd/A at 10,000 cd/m2 were obtained.
IT **126213-51-2**, PEDOT
(**electroluminescent** devices using a layered organic-inorg. perovskite structure as emitter)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 76
ST **electroluminescent** device layered org inorg perovskite structure
IT **Electroluminescent** devices
Luminescence
Quantum well devices
UV and visible spectra
(**electroluminescent** devices using a layered organic-inorg. perovskite structure as emitter)
IT 147-14-8, Copper phthalocyanine 50851-57-5 **126213-51-2**, PEDOT 138372-67-5
(**electroluminescent** devices using a layered organic-inorg. perovskite structure as emitter)
IT 131457-08-4P
(**electroluminescent** devices using a layered organic-inorg. perovskite structure as emitter)
IT 10101-63-0, Lead diiodide 151059-43-7, 2-Phenylethylammonium iodide
(**electroluminescent** devices using a layered organic-inorg. perovskite structure as emitter)
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 42 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:400125 HCAPLUS
DOCUMENT NUMBER: 135:187080
TITLE: Energy level alignment at polymer/electrode interfaces in **light-emitting** devices studied by photoelectron spectroscopy
AUTHOR(S): Greczynski, Grzegorz; Kugler, Thomas; Salaneck, William R.
CORPORATE SOURCE: Department of Physics, Linkoeping University, Linkoeping, S-561 83, Swed.
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (**2001**), 4105(Organic Light-Emitting Materials and Devices IV), 105-118
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The band alignment at the interface between **electroluminescent** polymers and the electrodes in polymer LEDs was studied using photoelectron spectroscopy. Chemical factors like the formation of InCl3 during conversion of precursor-PPV on ITO could be directly monitored with XPS. Films of **electroluminescent** polymers were studied on a range of ITO and metal electrodes with different work functions, as well as

with an intermediate, elec. conducting polymer layer, using UPS. For the polymers spin-coated directly onto the substrates, the vacuum levels are aligned. In the case of conducting polymer films on ITO or metal substrates, the Fermi levels are aligned. With a conducting polymer layer sandwiched between the **electroluminescent** polymer and the ITO electrode, the polymer bands align to the vacuum level of the conducting polymer. The barrier to hole injection into the **electroluminescent** polymer is determined by the work function of the conducting polymer instead of the work function of the ITO electrode. The study of the band alignment at polymer electrode interfaces was extended to 3-**layer structures**, resulting in agreement with the common assumption that the potential drop over the polymer layer in a polymer LED is the difference between the electrode work functions.

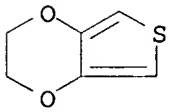
IT **126213-51-2**, PEDOT
(energy level alignment studied by UPS and XPS in LEDs at electrode interface with poly(4-styrenesulfonate)-doped)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, 66, 76

ST diode **light emitting** polymer electrode interface photoelectron energy level; LED polymer electrode interface photoelectron energy level alignment

IT **Electroluminescent** devices
(energy level alignment at polymer/electrode interfaces in)

IT **126213-51-2**, PEDOT
(energy level alignment studied by UPS and XPS in LEDs at electrode interface with poly(4-styrenesulfonate)-doped)

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 43 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:338904 HCAPLUS
DOCUMENT NUMBER: 134:335353
TITLE: Method of producing vertical interconnects between thin film microelectronic devices and products comprising such vertical interconnects
INVENTOR(S): De Leeuw, Dagobert M.; Gelinck, Gerwin H.; Matters, Marco
PATENT ASSIGNEE(S): Koninklijke Philips Electronics N.V., Neth.
SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001033649	A1	20010510	WO 2000-EP10160	2000 1013 <--
W: JP RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1145339	A1	20011017	EP 2000-972773	2000 1013 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003513475	T2	20030408	JP 2001-535245	2000 1013 <--
US 6635406	B1	20031021	US 2000-704519	2000 1102 <--

PRIORITY APPLN. INFO.: EP 1999-203603 A 1999 1102 <--
WO 2000-EP10160 W 2000 1013 <--

AB The present invention provides a method of photochem. producing a vertical interconnect between a 1st and a 2nd thin-film microelectronic device in a vertical interconnect area which comprises an overlap of a stack of a 1st elec. conducting area, optionally an organic elec. semiconducting area, an organic elec. insulating area comprising adapted photoresist material and a 2nd organic elec. conducting area, in which the organic elec. insulating area is removed within the overlapping area and substituted by an elec. conducting area which is extended from at least the 1st or the 2nd elec. conducting area. The method is useful in the manufacture of **electronic devices**, preferably integrated circuits, consisting substantially of organic materials.

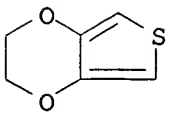
IT **126213-51-2**, Poly-3,4-ethylenedioxythiophene
(elec. conductive films; method of producing vertical interconnects between thin film microelectronic devices and products comprising such vertical interconnects)

RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01L051-40
ICS H01L051-00; H01L021-768; H01L023-532
CC 76-3 (Electric Phenomena)
Section cross-reference(s): **38**
IT 9033-83-4, Polyphenylene 25233-34-5, Polythiophene 96638-49-2, Polyphenylenevinylene **126213-51-2**, Poly-3,4-ethylenedioxythiophene
(elec. conductive films; method of producing vertical interconnects between thin film microelectronic devices and products comprising such vertical interconnects)
IT 58109-40-3, Diphenyliodonium hexafluoro **phosphate**
(photoinitiator; method of producing vertical interconnects between thin film microelectronic devices and products comprising such vertical interconnects)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 44 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:129765 HCAPLUS
DOCUMENT NUMBER: 134:185757
TITLE: **Luminescent** material and **luminescent** component
INVENTOR(S): Tsukada, Yoshihisa; Adegawa, Yutaka
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001049247	A2	20010220	JP 1999-224074 <--	19990806

PRIORITY APPLN. INFO.: JP 1999-224074 <-- 19990806

AB The invention refers to an **electroluminescent** material and device containing the compound [CH2CR3(L1)q(X1)r(L2)sAr1C(Ar2):CR1Ar3-CR2:C-Ar3Ar4]p [Ar1,3 = arylene, divalent heterocyclic, or a combination thereof; Ar2,4,5 = H, aryl, or heterocyclic; R1,2 = H, cyano, alkyl, alkoxy, alkylthio, aryloxy, arylthio, heterocyclic, oxyheterocyclic, or thioheterocyclic; R3 = H, halo, alkyl, or aryl; p ≥ 1; L1,2 = divalent linking group; X1 = alkylene,

arylene, divalent heterocyclic, or -R4(OR5)t-; q,r,s = 0, 1; R4,5 = alkylene; t ≥ 1].

IT **155090-83-8**, Baytron P
(**luminescent** material and **luminescent** component)

RN 155090-83-8 HCAPLUS

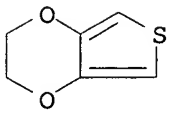
CN Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126213-51-2
CMF (C6 H6 O2 S)x
CCI PMS

CM 2

CRN 126213-50-1
CMF C6 H6 O2 S



CM 3

CRN 50851-57-5
CMF (C8 H8 O3 S)x
CCI PMS

CM 4

CRN 26914-43-2
CMF C8 H8 O3 S
CCI IDS

D1—CH═CH$_2$

D1—SO$_3$H

IC ICM C09K011-06
ICS C08F012-22; C08F020-10; C08F020-56; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST **electroluminescent** device phosphor polymer

IT Phosphors
(**electroluminescent**; **luminescent** material and **luminescent** component)
IT **Electroluminescent** devices
(**luminescent** material and **luminescent** component)
IT **155090-83-8**, Baytron P 326592-44-3 326592-51-2 326592-59-0 326592-63-6 326592-71-6 326592-78-3 326592-85-2 326592-91-0 326592-97-6
(**luminescent** material and **luminescent** component)
IT 1137-42-4P, 4-Hydroxybenzophenone 1592-20-7P, 4-Chloro-methylstyrene 326592-30-7P
(**luminescent** material and **luminescent** component)
IT 78-40-0, Triethyl **phosphate** 92-52-4, Biphenyl, reactions 30525-89-4, Paraformaldehyde
(**luminescent** material and **luminescent** component)
IT 119-61-9P, Benzophenone, reactions 63391-95-7P 326592-31-8P 326592-36-3P
(**luminescent** material and **luminescent** component)

L41 ANSWER 45 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:772885 HCAPLUS
DOCUMENT NUMBER: 133:343431
TITLE: Fabrication of organic thin-film semiconducting devices with conducting polymer layers
INVENTOR(S): Roman, Lucimara Stolz; Inganas, Olle; Hagel, Olle; Berggren, Magnus; Gustafsson, Goran; Carlsson, Johan
PATENT ASSIGNEE(S): Thin Film Electronics Asa, Norway
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000065653	A1	20001102	WO 2000-NO127	2000 0414
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WO 2000065653	C2	20040805		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NO 9901916	A	20001023	NO 1999-1916	

1999
0422
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NO 314525 B1 20030331

CA 2370852 AA 20001102 CA 2000-2370852
2000
0414
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EP 1194957 A1 20020410 EP 2000-927981
2000
0414
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

AU 755372 B2 20021212 AU 2000-46283
2000
0414
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JP 2002543590 T2 20021217 JP 2000-614501
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RU 2214651 C2 20031020 RU 2001-131419
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US 6852555 B1 20050208 US 2001-720329
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PRIORITY APPLN. INFO.: NO 1999-1916 A
1999
0422
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WO 2000-NO127 W
2000
0414
<--

AB In a method in the fabrication of an organic thin-film semiconducting device comprising an electrode arrangement with electrodes contacting a semiconducting organic material, an anode in the electrode arrangement is made as a two-**layer structure**, where the 1st layer is a conducting or semiconducting material or a combination thereof deposited on a substrate and a 2nd layer is a conducting polymer with a work function higher than that of the material in the 1st layer. A 3rd layer consisting of semiconducting organic material and forming the active material of the device is deposited on the top of the anode, and the cathode made of a 4th layer of a metal deposited on a 3rd layer. In a preferred embodiment a low work function metal was used in the 1st layer, a doped conjugated polymer such as PEDOT-PSS in the 2nd layer, while the cathode may be formed of the same metal as used in the 1st layer. Use in the manufacturing of the electrode arrangement in an organic thin-film diode or in a **transistor** structure.

IT **126213-51-2**
(fabrication of organic thin-film semiconducting devices with conducting polymer layers)

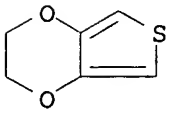
RN 126213-51-2 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA

INDEX NAME)

CM 1

CRN 126213-50-1
CMF C6 H6 O2 S



IC ICM H01L027-01
ICS H01L049-02; H01L051-00
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 38
IT Conducting polymers
Diodes
Semiconductor device fabrication
Thin film **transistors**
(fabrication of organic thin-film semiconducting devices with conducting polymer layers)
IT 9003-53-6D, Polystyrene, sulfonated 25233-30-1, Polyaniline 25233-34-5, Polythiophene 30604-81-0, Polypyrrole 104934-50-1, P 3HT **126213-51-2** 138184-36-8, MEH-PPV
(fabrication of organic thin-film semiconducting devices with conducting polymer layers)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 46 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:557776 HCAPLUS
DOCUMENT NUMBER: 131:164272
TITLE: Electrolytic capacitor and its manufacture
INVENTOR(S): Saito, Kazuyo; Nitta, Yukihiro; Tada, Hiroshi; Iwamoto, Shigeyoshi
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 938108	A2	19990825	EP 1999-100927	1999 0120
			<--	
EP 938108	A3	20040107		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11283874	A2	19991015	JP 1998-350072	1998

				1209
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US 6307735	B1	20011023	US 1999-233936	
				1999
				0120
			<--	
TW 412765	B	20001121	TW 1999-88101215	
				1999
				0127
			<--	
CN 1225495	A	19990811	CN 1999-101708	
				1999
				0128
			<--	
US 6962612	B1	20051108	US 2000-616944	
				2000
				0714
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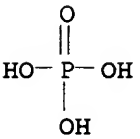
PRIORITY APPLN. INFO.:	JP 1998-15269	A
		1998
		0128
	<--	
	JP 1998-350072	A
		1998
		1209
	<--	
	US 1999-233936	A3
		1999
		0120
	<--	

AB An electrolytic capacitor includes (a) a capacitor element having a pos. electrode, a neg. electrode, and a solid organic conductive material disposed between the pos. electrode and the neg. electrode; (b) an electrolyte; (c) a case for accommodating the capacitor element and the electrolyte; and (d) a sealing member disposed to cover the opening of the case. The solid organic conductive material contains an organic semiconductor and/or a conductive polymer. An electrolytic capacitor having excellent impedance characteristic, small leakage current, excellent reliability, and high dielec. strength is obtained.

IT **7664-38-2**, **Phosphoric acid**, processes
126213-51-2
(manufacture of electrolytic capacitors containing)

RN 7664-38-2 HCAPLUS
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

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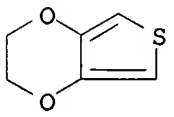
CMF C6 H6 O2 S



IC ICM H01G009-02
CC 76-10 (Electric Phenomena)
Section cross-reference(s): **38**
IT 56-81-5, 1,2,3-Propanetriol, processes 62-23-7, p-Nitrobenzoic acid 69-65-8, Mannite 88-75-5 96-48-0 107-21-1, 1,2-Ethanediol, processes 552-16-9, o-Nitrobenzoic acid 1518-16-7D, TCNQ, complexes 1623-15-0, Monobutyl **phosphate** 3385-41-9, Diammonium adipate 7429-90-5, Aluminum, processes 7440-44-0, Carbon, processes **7664-38-2**, **Phosphoric acid**, processes 7727-54-0, Ammonium persulfate 7803-65-8 10028-22-5, Ferric sulfate 10043-35-3, Boric acid, processes 13445-49-3, Peroxydisulfuric acid ([(HO)S(O)2]2O2) 25233-30-1, Polyaniline 25233-30-1D, Polyaniline, sulfonated 25233-34-5, Polythiophene 25233-34-5D, Polythiophene, sulfonated 30604-81-0, Polypyrrole 30604-81-0D, Polypyrrole, sulfonated 50905-10-7, 1,6-Decanedicarboxylic acid 77214-82-5 88107-08-8 92538-40-4 117920-72-6 **126213-51-2** 127171-87-3, Tetramethyl ammonium phthalate, processes 167552-54-7, processes
(manufacture of electrolytic capacitors containing)

L41 ANSWER 47 OF 47 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:182799 HCAPLUS
DOCUMENT NUMBER: 130:231085
TITLE: Manufacture of tantalum solid electrolytic capacitor with high capacitance
INVENTOR(S): Akami, Kenji; Kudo, Yasuo; Matsuie, Yasue
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11074156	A2	19990316	JP 1997-232064	1997 0828
			<--	
JP 3255091	B2	20020212		

PRIORITY APPLN. INFO.: JP 1997-232064 1997 0828
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AB The method involves the following steps; (1) treating an anode comprising sintered Ta valve metal powders with a

phosphoric acid aqueous solution to form a dielec. oxide layer, (2) keeping the anode in air, (3) immersing the anode in a monomer solution, (4) immersing in an oxidizing agent solution to form an elec. conducting polymer-containing solid electrolyte layer, and (5) forming a cathode. In the method, the anode may be immersed in the monomer solution at reduced pressure or heated in air instead of keeping in air. Capacitors with high capacitance and low temperature dependence of capacitance are obtained.

IT **126213-51-2P**, 3,4-Ethylenedioxythiophene homopolymer
(manufacture of tantalum solid electrolytic capacitor with high capacitance)
RN 126213-51-2 HCAPLUS
CN Thieno[3,4-b]-1,4-dioxin, 2,3-dihydro-, homopolymer (9CI) (CA INDEX NAME)

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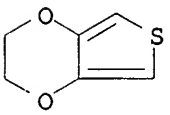
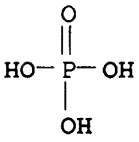
CRN 126213-50-1
CMF C6 H6 O2 S



IT **7664-38-2**, **Phosphoric acid**, uses
(manufacture of tantalum solid electrolytic capacitor with high capacitance)
RN 7664-38-2 HCAPLUS
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM H01G009-028
ICS H01G009-035; H01G009-052
CC 76-10 (Electric Phenomena)
Section cross-reference(s): **38**
IT 1314-61-0P, Tantalum oxide 30604-81-0P, Polypyrrole
126213-51-2P, 3,4-Ethylenedioxythiophene homopolymer
(manufacture of tantalum solid electrolytic capacitor with high capacitance)
IT **7664-38-2**, **Phosphoric acid**, uses
(manufacture of tantalum solid electrolytic capacitor with high capacitance)